

JANUARY 1957

# CCJ COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



## *in this issue*

City Operators Look into Air Conditioned Buses  
Tubeless Truck Tires—Boon or Bust?  
Latest Truck Selection Specifications



## Now . . . most power of the low-priced 3— New **DODGE** *PowerGiants*

1957 line-up gives you up to 232 hp.

Dodge tops the low-priced field in V-8 power by a big margin—actually delivers as much as **31% more!** This *extra power* in reserve saves engine strain . . . wear . . . excessive repairs. What's more, Dodge V-8's use *regular* gas, help keep your cost per ton-mile *down!*

**Extra payload capacity.** You can haul more—up to **73%** more in the 300 model pick-up, for example.

**Extra handling ease.** Exclusive push-button automatic transmission\*! Sharpest turning and easiest steering in the industry!

See the new *Power Giant* line-up now at your Dodge dealer's. You'll see features that prove it pays to get your Dodge dealer's deal before you decide on *any* truck.

\*Available on all low-tonnage and forward-control models.

# DODGE TRUCKS

WITH THE FORWARD LOOK



Pick-up model 100



Forward-Control model 300



C.O.E. tractor model 700

### DODGE meets your hauling needs!

Conv. Models	Max. G.V.W.	Max. G.C.W.	Max. V-8 HP
100	5,100 lbs.	—	204
200	7,500 lbs.	—	204
300	8,800 lbs.	—	204
400	15,000 lbs.	26,000 lbs.	197
500	18,000 lbs.	32,000 lbs.	197
600	21,000 lbs.	35,000 lbs.	197
700	23,000 lbs.	45,000 lbs.	216
800	25,000 lbs.	55,000 lbs.	222
900	30,000 lbs.	65,000 lbs.	232
<b>Forward-Control Models</b>			
P300	9,000 lbs.	—	204
P500	15,000 lbs.	—	204
<b>C.O.E. Models</b>			
C500	18,000 lbs.	32,000 lbs.	197
C600	21,000 lbs.	35,000 lbs.	197
C700	22,500 lbs.	45,000 lbs.	216
<b>Tandem Models</b>			
T700	32,000 lbs.	45,000 lbs.	216
T800	36,000 lbs.	55,000 lbs.	222
T900	46,000 lbs.	65,000 lbs.	232



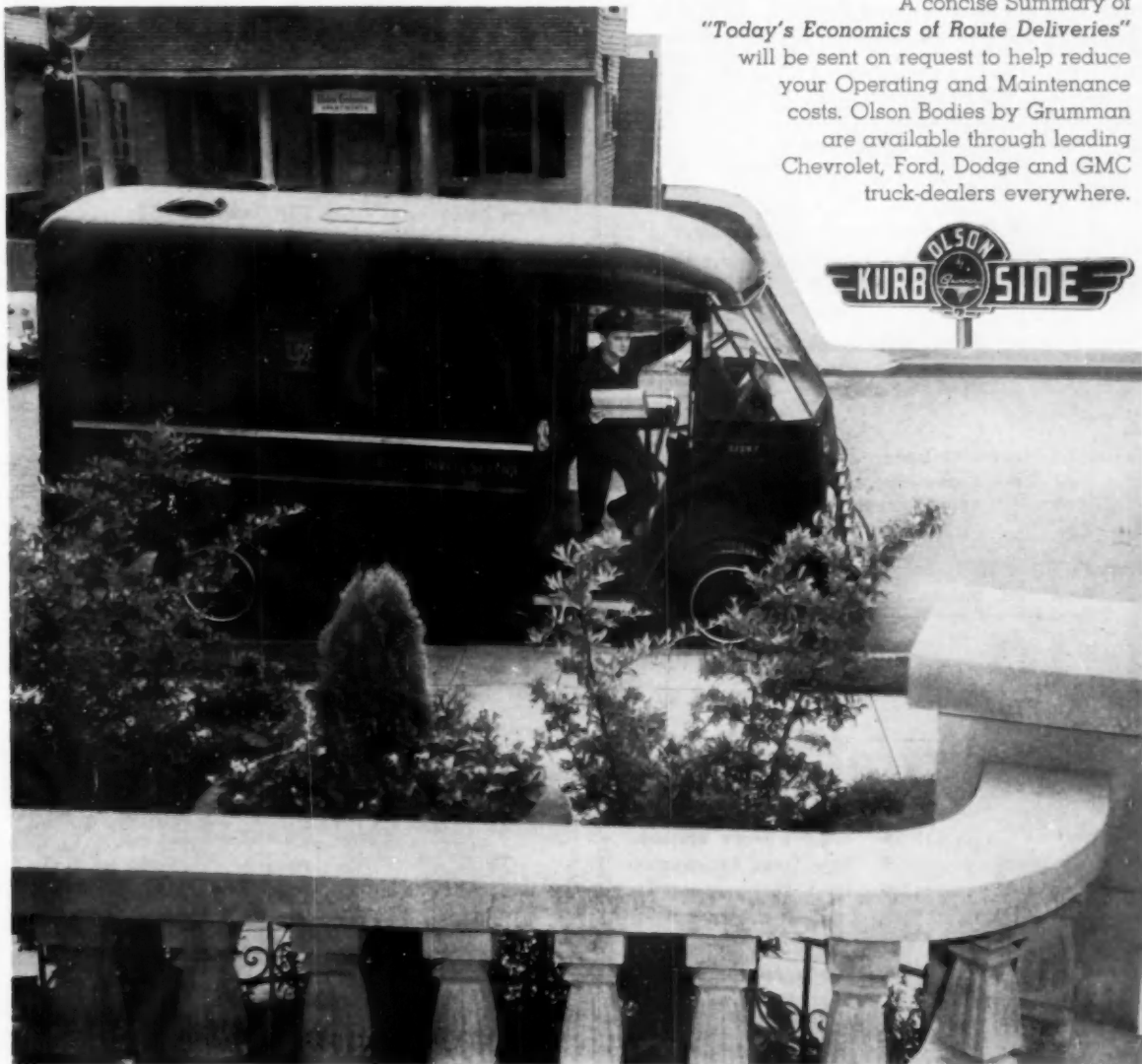
# 3,000 Aluminum Bodies

United Parcel Service began using Aluminum Bodies in 1946. Their fleets total over 6,000 vehicles of which at least half are now equipped with Aluminum Bodies. For some years, their Aluminum Bodies were custom-built to the company's specifications, but recently most requirements have been satisfied by standard production units, such as Olson Kurb-Sides. Mr. Willard Bixby, Vice President, thinks that their quantity use of Aluminum Bodies for so many years speaks for itself and thus confirms their economies.

We are proud that Olson Bodies by Grumman are an important addition to UPS fleets from coast to coast, serving leading department stores and retail specialty shops. In addition, United Parcel Service serves thousands of wholesalers and manufacturers in delivering their smaller packages. Today's high cost of manpower emphasizes the importance of long life bodies that weigh less and cost less for corrosion and dent repairs... due to the use of heat-treated, thick but lightweight Aluminum Alloys.

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A concise Summary of  
*"Today's Economics of Route Deliveries"*  
will be sent on request to help reduce  
your Operating and Maintenance  
costs. Olson Bodies by Grumman  
are available through leading  
Chevrolet, Ford, Dodge and GMC  
truck-dealers everywhere.



# COMMERCIAL CAR

— JANUARY 1957 • Vol. 92 • No. 4 —

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### ON THE COVER . . .

Would you like to sit next to that cute little red-head and still remain cool? It's possible. Ride with her in an air conditioned bus. Like to know more about how it's done? Seven fleets are included in the special report on air conditioned transit buses that begins on page 66.

# JOURNAL

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## How to prevent a killing



## with one finger!

Choose from Yankee's  
 36 different stock sets  
 of Class A Type I  
 turn signals with  
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 cancelling switches

FOR SAFETY'S SAKE  
 MAKE IT



TURN SIGNALS



Low cost Thin-A



Heavy duty  
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Low maintenance  
sealed beam

Send for complete catalog of fleet safety accessories  
 YANKEE METAL PRODUCTS CORP., Norwalk, Conn.



**"My new rig has a full-depth Airfoam seat—so the Boss made me change places with him!"**

Airfoam—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

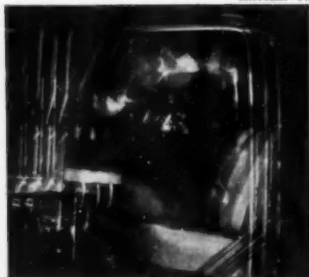
**How full-depth AIRFOAM seats ►  
increase driver-efficiency, cut costs:**

You can specify Full-Depth  
AIRFOAM seats and backs as  
original equipment on any truck!  
But be sure it's



**Airfoam**  
MADE ONLY BY  
**GOOD YEAR**

The World's Finest, Most Modern Cushioning



**MULTIPLE-EXPOSURE PHOTO** showing how ordinary cushions amplify drags and jars, cause driver to bounce up as controls come down. Trying to compensate, driver cramps muscles, frazzles nerves, drains efficiency. Cushions wear out, too!



**SAME CAB. AIRFOAM** (with over half-a-million fresh air cushions per cubic inch) muffles and absorbs drags and jars, keeps driver's motion in step with controls. Result: Fresher, happier, more efficient drivers—plus undamaged cushions!

Goodyear, Automotive Products Dept., Akron 16, Ohio



# THE OVERLOAD

E D I T O R I A L C O M M E N T

*Everybody*

**Who Is Afraid of the Big Bad Truck?**

HERE'S OUR VOTE for New Year's Resolution No. 1.

*Cut all accidents to the bone and exterminate the runaways!*

We have a big assist from the ICC in the form of the new emergency brake regulations, now in effect. Some operators have been caught with their hose down. And ICC's stepped up enforcement may make it tough for others.

Frankly we hope it does for the time has come to wipe out the curse of the runaway truck. It's also time to realize that these new regs are an asset, rather than a liability as some seem to think.

Headline accidents always hurt when they come closest to home. Last month one happened less than a mile from ours. Fortunately as the tractor trailer spewed itself across a ramp of the Schuykill Expressway, it only flattened the rear end of a convertible. By a one-foot margin hung the lives of all three occupants.

We tried to find out more. But the pall of secrecy engulfed it after the first eight-column headline. No big fleet was involved, so there was no safety supervisor to call. The ICC was not immediately interested. To the police it was just a routine accident. Nobody was killed, so apparently nobody cared.

But the mess was there just the same. Another ugly scar chalked up against the trucking

industry. Another nightmare for people everywhere when they see a big truck come down behind them.

We know. This sounds much more like an anti-truck newspaper editorial than one from CCJ. For years we've defended the industry—in print and out. For years we've poo-pooed the idea of frightened women afraid of the big bad truck.

But this one is from the heart. It's time to do something. And fast.

Obviously the biggest problem lies with the untouchable. He's the guy who doesn't read magazines like this and doesn't belong to any association. He never hears about a new regulation till he's stopped on the highway. More often than not he's a one-truck operator, but sometimes he's big. Basically he doesn't give a damn.

We're seriously thinking of a prize contest on the best way to bridge the gap between responsible operators and the untouchables. That's a tough one and contests get complicated. But while we're working on details, we will gladly pay full space rates for useable and workable thoughts on this subject. And that goes for association men as well as fleet operators. Let us have your ideas.

Meanwhile remember Resolution No. 1. It draws no class or party lines. It applies to all.

*Bart Rawson*  
Editor

**More than 650  
million pounds of  
Texaco Marfak  
have been sold**



**TUNE IN:**  
METROPOLITAN  
OPERA  
radio broadcasts  
every Saturday afternoon



# TEXACO



# Heavy Loads... Light Costs

## When you use Texaco Marfak

for chassis lubrication, you'll find that parts last longer, maintenance costs come down. That's because *Texaco Marfak* stays in the bearings — heavy loads don't squeeze it out, rough roads won't pound it out. *Texaco Marfak* seals itself in — gives extra hundreds of miles of protection against wear and rust.

In wheel bearings, use *Texaco Marfak Heavy Duty*. You'll get extra thousands of miles between repackings. This superlative lubricant seals out dirt and moisture, seals itself in — assuring safer braking and longer bearing life. No seasonal change necessary.

If you want a multi-purpose grease, use *Texaco Marfak Heavy Duty Special 2*. It will handle all chassis, wheel bearing, water pump and other lubrication — pumps easily at low temperatures, resists water washing and stands up in severest service.

For engines, use *Texaco D 303 Motor Oil HD* — fully detergent and dispersive to keep engines clean and assure full power with low fuel consumption.

For transmissions and differentials, use *Texaco Universal Gear Lubricant EP*. You'll get smoother operation, reduce your maintenance costs.




Let a Texaco Lubrication Engineer help you cut maintenance costs throughout your operation. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.


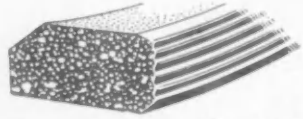

*Highway near Quartzsite, Arizona*

# Lubricants and Fuels

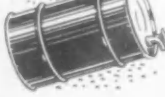

FOR TRUCK AND BUS FLEETS

In top  grooves where there is too much heat  and too much  friction and too little lubrication  the only answer is

chrome piston rings.  Sealed Power  chrome rings are the choice of most car makers 

for original  equipment, because  the casting is right, the chrome plating is right, 

and factory lapping  insures quick seating  and immediate

oil  control. Sealed Power KromeX ring sets  are the choice of most mechanics for replacement, too. KromeX

is the ideal set for re-ring or re-bore.

Sealed Power Corp., Muskegon, Mich.





# AT YOUR SERVICE

TIMELY NOTES ON MAINTENANCE AND OPERATION By PAUL A. MURPHY, Technical Editor

## Straightening Front Suspensions

**B**ENDING should be done cold if possible. To obtain the desired strength, very careful temperature control is required in heating for hardening and tempering. Heat-treated parts, especially where extreme hardness is an important factor, are designed to be as tough as possible in order to resist the shocks and extreme stresses which are met in service.

If a front axle, knuckle or any axle is bent in service, it should, if possible, be returned to its original position by cold straightening. There is, of course, a limit to the amount of cold straightening that can be done. This varies with the ductility of the heat-treated part.

This ductility is very little in drive shafts and quite large in front axle centers. Therefore, the amount of cold straightening which can be done on an axle shaft is very small, whereas considerable bending may be performed cold on the axle centers, steering arms, etc.

## Hot Bending Is Risky

**H**OT BENDING is very uncertain and should only be used as a last resort, and then only as a very temporary repair. Many shops are unable to apply sufficient force to straighten large parts cold and so they resort to local heating in order to soften the material so that it bends to its former position.

In steering arms, steering knuckles, and front axles, this is fairly satisfactory, providing the temperature does not exceed 1200°F, which corresponds to a very dull red barely perceptible in the daytime and rather dull even in the dark.

In many cases this consideration is entirely overlooked and a torch is applied to the bent part and it is heated to a "cherry red". Observation, and in fact actual experiences in service repairs, have shown that "cherry-red" may be anything from 1200° to 2000°F, depending on the particular job and shop in which it is done.

After straightening the heated piece is allowed to cool in the air and the result is that the strength of the repaired part is very much reduced as compared with its original condition.

A study of the accompanying table will indicate that a very dangerous condition may be obtained by hot bending and that no matter how well the work is done mechanically, and no

Part	Yield Point in psi as originally furnished	Yield Point in psi when repaired	Original is stronger than repaired part by
Axle Center.....	70,000	40,000	75%
Steering Arm & Steering Knuckle...	100,000	70,000	43%
Axle Shaft.....	160,000	90,000	78%
Bolts, etc.....	75,000	50,000	50%

matter how nice the newly painted part looks, it may be only half as strong as it was originally and may cause a serious, if not fatal accident by failure.

The foregoing table will give some idea as to the difference in strength between the properly heat-treated piece and that of a part which is heated "cherry-red" and allowed to cool in the air.

## Welding Torch Heating Tips

**W**HEN AN acetylene torch or electric arc is used for repair purposes, the danger of overheating is very great. It must be remembered that if the overheating is carried far enough, the strength of the part is reduced almost to that of a casting and in some cases the repaired piece has a strength barely 10 per cent of what it had originally.

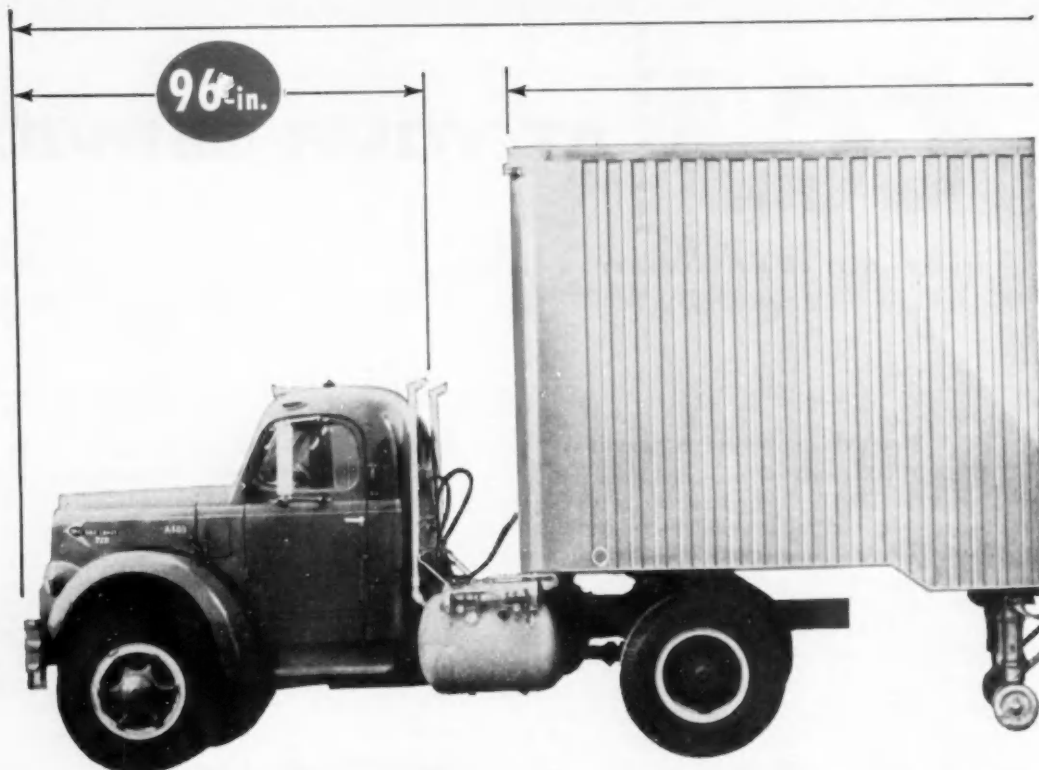
Acetylene torches and electric arcs require great care in handling when applied to heat treated parts. There is small chance of obtaining satisfactory results unless the mechanic handling the torch or arc is highly skilled.

It may be argued of course that the bent part can be quenched and tempered, providing that the part has not been overheated, so as to give the original structure. If this can be done and the finish of machined surfaces is not damaged, there is no objection to such hot bending.

But where so much depends on the part and because the likelihood is small that a repaired

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REO  
Model A-603  
220 H.P. V-8,  
LPG

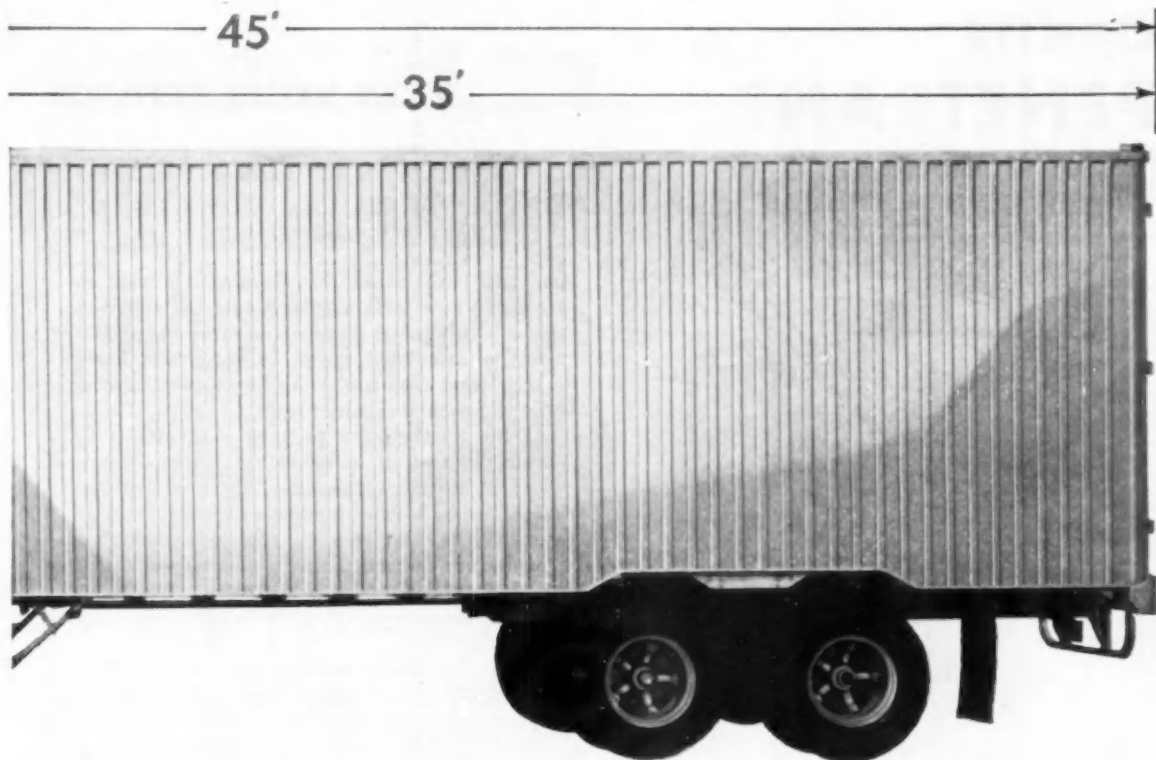


# REO'S 96-in. TRACTOR

## Hauls 35 Foot Square Nose Trailer

**96-IN. FROM BUMPER TO BACK OF CAB!** That's what makes it possible for Reo 235 H.P. V-8's to haul 35 ft. trailers within 45 ft. overall length. And this, of course, means bigger payloads for you—because a 35 ft. square nose (7 ft. high) will provide as much as *16.8 cu. ft. of extra payload area!* Being more compact, Reo tractors also give you more power with less weight. Reo V-8 Tractors are actually up to 2000 pounds lighter than others in Reo's range. You get 2000 pounds more payload! Reo Gold Comet V-8's gas or LPG — both with advanced wet sleeve construction and short stroke design — are pound for pound the most powerful truck engines on the road!

**CONVENTIONAL CAB!** Yes, you get this vital 96-in. dimension—from bumper to back of cab—with all the driver comfort of a conventional cab. There is less heat, less noise, and more leg room in Reo's "full comfort" cabs. This means more efficient as well as more comfortable drivers. It means, too, that the engine is much more accessible for servicing. So take a long, close look at Reo—and compare before you decide! See one perform on your job. Your Reo representative will gladly arrange it. Prove to yourself that Reos deliver more than you expect from any truck!



# with CONVENTIONAL CAB

## Within 45 Foot Overall Length

**LOOK AT REO . . . For Bigger Pay Loads . . .**  
**More Compact Power . . . Greater Driver Efficiency!**

**100,000 MILE OR 1 YEAR WARRANTY**  
 on every Reo Gold Comet engine—your assurance  
 from the manufacturer of the lifetime performance  
 that's built into the Reo Truck for your job.  
 Look under "R" in the telephone book and call  
 your Reo Factory Branch or Distributor today!

### **REO MOTORS, INC.**

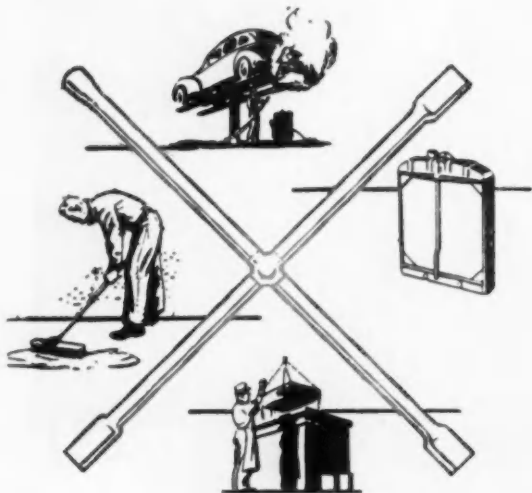
LANSING 20, MICHIGAN • TORONTO, ONTARIO

SUBSIDIARY OF **BOHN** ALUMINUM AND BRASS CORPORATION



TRUCKS, BUSES AND GOLD COMET ENGINES FOR ORIGINAL EQUIPMENT, INDUSTRIAL AND REPLACEMENT—GAS OR LPG

# OAKITE PENETRANT.



## ... 4 way cleaner

Like the 4-way lug wrench—so popular because this one tool fits all the usual size lugs—Oakite Penetrant has four-in-one versatility when it comes to cleaning in garages and repair shops.

A single drum of Oakite Penetrant gives you the all-round cleaning ability ordinarily requiring four separate drums. Here's what it does.

- 1 **CHASSIS AND MOTORS:** wets, penetrates, breaks up heavy, greasy road sludge.
- 2 **COOLING SYSTEMS:** floats out muck, grease. Improves engine performance.
- 3 **REPAIR PARTS:** removes dirt and grease. Speeds inspection and repair.
- 4 **FLOORS, PITS, LIFT AREAS:** loosens even toughest grease deposits. Makes for safe walking.

And just as the 4-way wrench does a better job than the old-style single type—because an “assist” is built into its design—Oakite Penetrant does a superior job whether used on chassis, cooling system, parts or floors. The big assist, with Oakite Penetrant, is the scientific blending of the best-acting ingredients.

To say nothing of the assist your local Oakite man will be glad to give you on any of your cleaning problems. Call him, or write for booklet on automotive cleaning. Oakite Products, Inc., 40B Rector St., New York 6, N. Y.



Export Division  
Cable Address: Oakite

Technical Service Representatives in Principal Cities of U. S. and Canada

# CCJ AT YOUR SERVICE

Continued from Page 9

part can be obtained that is anywhere near as strong as the original, it should be apparent that hot bending is a serious matter, and should never be attempted except by those who know exactly what they are doing and especially how to heat-treat the repaired part.

If the part cannot be bent cold and it is decided to bend the part hot, use a temperature which is as low as possible, barely a dull red and which as a rule should be sufficient. If it is necessary to heat to a “cherry-red” or higher temperature to bend the part, it is very doubtful whether a satisfactory repair can be made and it would be more satisfactory to scrap the bent part.

Very few organizations are equipped to reheat-treat parts satisfactorily. When reheat-treating is done, retreated parts should be checked by Brinell or another accepted method to insure that the desired result has been achieved. Courtesy of Kenworth Service Manual.

### Anti-Freeze Leakage Contamination

**L**EAKAGE of permanent-type anti-freeze into the crankcase may result in serious engine troubles due to oil contamination. Crankcase oil when diluted with 3 per cent or less glycol loses most of its friction and gum reducing ability and extreme value and piston sticking results. To avert trouble from this source, servicemen should carefully inspect the condition of all gaskets when performing engine or winterization servicing.

### Chevrolet V-8 Gasket Changed

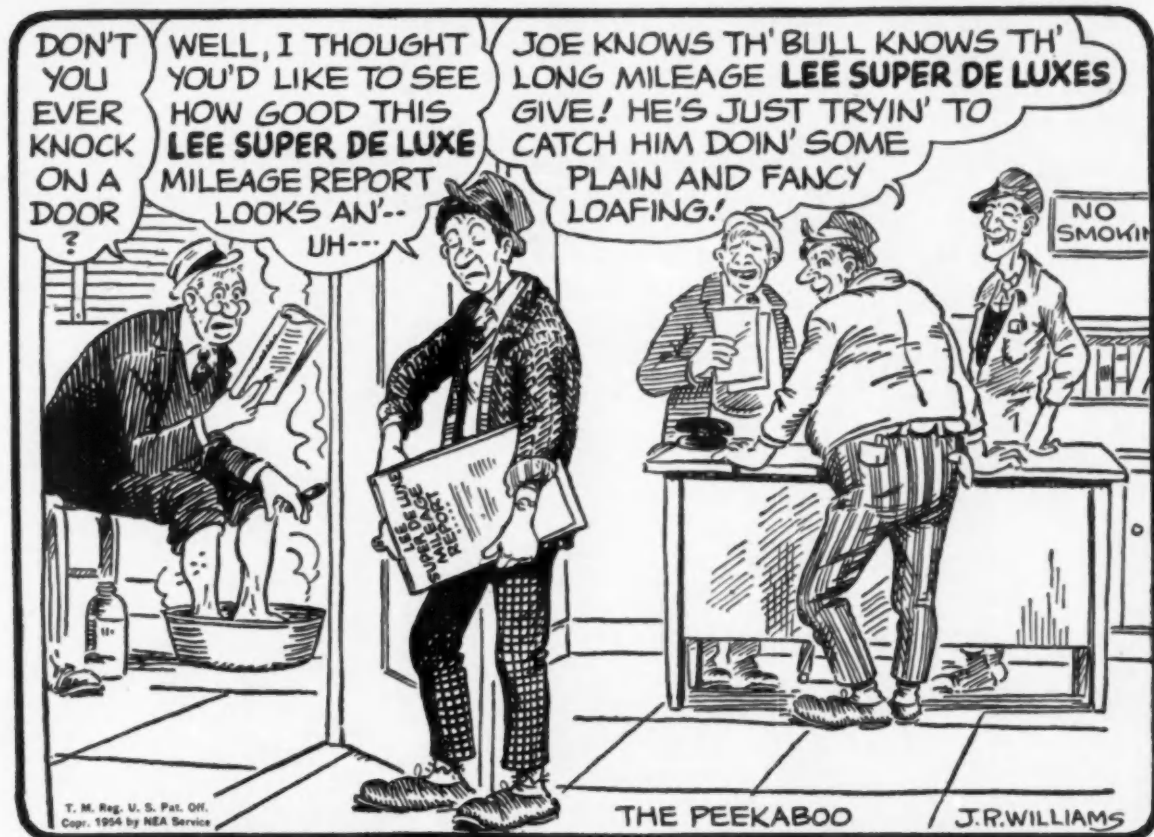
**T**O FURTHER aid the elimination of hard hot starting on trucks equipped with the V-8 engine, a new intake manifold-to-carburetor gasket with better insulation characteristics is now being used in production. Servicemen are advised that the new gasket should be used on all two-barrel carburetor V-8 truck engine installations when replacement is needed.

### High Speed Engine Miss?

**S**PARK PLUGS are frequently blamed for repeated engine missing but quite often the true source of the trouble lies elsewhere. To many mechanics, the confusing thing about this problem is that many times the installation of

(TURN TO PAGE 16, PLEASE)





## SUPER MILEAGE AT REGULAR PRICE

And you get extra recaps, too, with the Lee Super DeLuxe Highway Tire

Here's what every truck-tire user wants—extra original mileage, extra recaps, regular price.

The Lee Super DeLuxe Highway has a wide, flat-contour tread compounded of best-grade Smoked Sheet natural rubber for maximum mileage. The tread design provides excellent traction and is engineered to prevent small cuts from growing into long tread cracks.

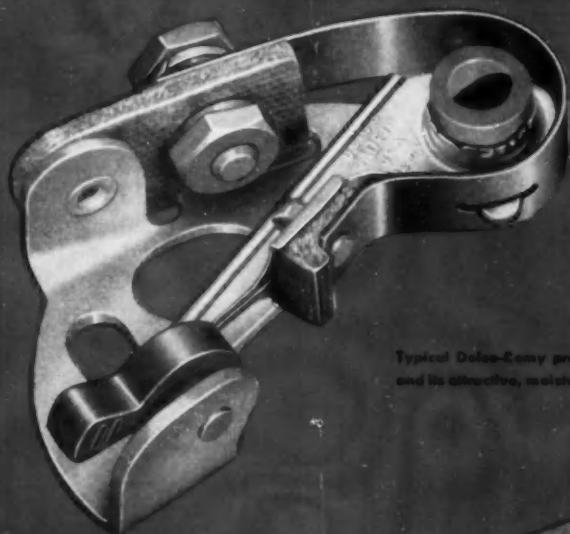
✓ Its carcass has Lee's special Lubri-Cushions—thin sheets of rubber between every ply. These lubricate the plies, reduce internal friction, and protect against bruise breaks by equalizing flexing strain over the entire road impact area.

Extra-strong, extra-tough Super-Tensile Cord assures greater protection against impact damage and blowouts. The cords are all treated by the exclusive Lee Flexlok Process, which minimizes tire growth and makes cord separation from the rubber bond practically impossible.

The Lee Super DeLuxe Highway is available in Super-Tensile rayon or nylon cord. It's an outstanding truck tire buy.

The complete Lee line, shown below, includes a tire which will lower your operating costs by giving longer life, more recaps. Let us prove it to you.





Typical Delco-Remy preassembled ignition contact set and its attractive, moisture-proof foil-wrapped package.



## **DELCO-REMY ANNOUNCES NEW PREASSEMBLED IGNITION CONTACT SETS IN MOISTURE-PROOF FOIL PACKAGES**

Now, new convenience, efficiency and sales appeal have been added to the quality features of Delco-Remy ignition contact sets. Preassembled, precisely adjusted and aligned, the new sets make installation easier and faster—assure top contact performance. And, what's more, each new set is enclosed, with instructions, in a trend-setting new package wrapped in *moisture-proof*, heat-sealed metal foil. These colorful, distinctive new packages stack neatly on the shelf, are easily identified, and assure the customer factory-fresh merchandise.

Specially developed to simplify service on hard-to-get-at distributors these convenient new Delco-Remy contact sets offer these important advantages:

- 1** Completely assembled unit for easier, quicker installation.
- 2** Precision spring adjustment and point alignment assure top contact performance.
- 3** Securely attached breaker spring holds adjustment during installation.
- 4** Patented plastic "point-holder" protects contact surfaces, maintains rigid alignment until installation is complete.
- 5** New moisture-proof, heat-sealed foil package protects contacts from dirt and oxidation—is easy to stock, identify, and *sell*.

Always replace with Delco-Remy contact sets when you service Delco-Remy equipped cars and trucks. They're the only ones with all the original equipment features. Available from your car or truck dealer or the United Motors System.

DELCO-REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA



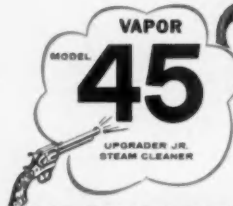
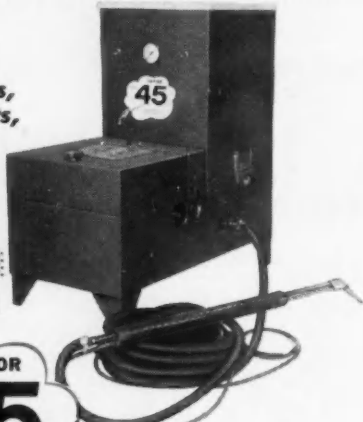
GENERAL MOTORS LEADS THE WAY—STARTING WITH

# **Delco-Remy**

ELECTRICAL SYSTEMS

## HERE'S A REAL MAINTENANCE MONEY SAVER...MONEY MAKER!

**Cleans,  
Sterilizes,  
Disinfects,  
Heats,  
Sprays**



*much more efficient  
at much less cost!  
only \$359 f. o. b. factory*



*Uses 1/2 as much fuel...a real whirlwind of a cost cutting, dirt-and-grease cutting machine. Outperforms big machines where a handy cleaner is needed. Pressure impact of steam penetrates smallest cracks and crevices. Permanent mount or portable on rubber tire wheels (optional at small additional cost.)*

Send for complete information

### **Vapor Heating Corporation**

80 East Jackson Boulevard, Chicago 4, Illinois, Dept. 4-A  
Give me all the facts about the new Vapor "45" Steam Cleaner.

Name \_\_\_\_\_ Position \_\_\_\_\_  
Company \_\_\_\_\_  
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## CCJ AT YOUR SERVICE

Continued from Page 12

new spark plugs seems to clear up the trouble. The unfortunate part is that the trouble often reoccurs in a short time.

The truth is that for a short time new spark plugs, by virtue of their sharp electrode surfaces, require less secondary voltage to operate, but these sharp edges soon wear off in operation and the missing trouble returns.

Before replacing spark plugs in the case of engine missing, consider the possibility that the secondary voltage may not be high enough to operate plugs at higher speeds.

While it is a possibility that the plugs are causing the miss, an examination of the insulator tips for excessive deposit accumulation usually will reveal if the deposits are shorting out the plugs, in which case the cleaning will improve operation. To be on the safe side, inspect the balance of the ignition system for any conditions that would contribute to lower secondary voltages.

### **Distributor Examination . . .**

**I**NSPECT the distributor contacts for burning, pitting, or misalignment. Inspect the breaker arm rubbing block for wear. Replace contacts if necessary, and adjust to proper contact gap. Inspection of the breaker contacts will reveal possible need for a new condenser.

Check the distributor rotor contact strip for burned surfaces. If burning is confined to the end surfaces of the blade and not severe, replacement is not necessary. However if burning is evidenced on the top surface, it indicates the gap between the rotor and the distributor cap inserts is too great and the rotor should be replaced.

### **Spark Plug Wire Inspection . . .**

**M**ANY CASES of missing have been traced to the spark plug wires themselves. In many late model V-8 and 6-cyl overhead valve type engines, the spark plug wires are routed through metal covers. Frequently the wires become pinched in the assembly and short out.

Also on any ignition system the high tension insulation deteriorates with age and allows partial grounding of the secondary voltage. Look for distorted, oil soaked, or cracked secondary cable as a source of trouble.

(TURN TO PAGE 20, PLEASE)



# NOW

-NO job is too tough for tubeless tires

-When they're mounted on Goodyear Rims

Another Scoop for Goodyear Tubeless! Tractor shovel hard at work in Michigan sand pit. The tubeless tires are mounted on Goodyear Rims.

Here you see just a sample of the tough jobs tubeless tires are doing — in today's mammoth construction projects. How did tubeless tires get into this picture—and so successfully, too?

One of the biggest reasons is Goodyear's development of rims to fit every type of vehicle, from the smallest truck to the largest earth-mover.

Goodyear's vast tire-building experience brings many benefits to rim construction. With Goodyear Rims, you profit by such advantages as:

**Unusual Strength:** Thanks to an exclusive double-welding process, and added support at points of greatest stress, present-day Goodyear Rims are far stronger.

**Ease of Tire Mounting:** No tube and flap troubles.

**Special Tools:** Goodyear alone provides both hydraulic and hand tools especially made for off-the-road equipment.

**Bond-a-Coat Finish:** This protective coating affords long-lasting resistance to rust and corrosion.

**Got a Truck Rim Problem? GOODYEAR will solve it.**

If you have a rim problem, why not talk it over with the G. R. E. (Goodyear Rim Engineer). He'll save you time and money by helping you select the type and size of rim best suited to your needs. Write him at Goodyear, Metal Products Division, Akron 16, Ohio, or contact your local Goodyear Rim Distributor.

Buy and  
Specify

# GOOD YEAR

MORE TONS ARE CARRIED ON GOODYEAR RIMS THAN ON ANY OTHER KIND

**A MAINTENANCE "SUPER" REPORTS  
ON TUBELESS TRUCK TIRES—**

William A. Wild, Branch Motor Express Superintendent of Maintenance, has been in the trucking business "more years than he likes to recall" but he's always willing to learn a better way to help him keep his fleet on the road and making money.



**Q.** *Your fleet has been using tubeless tires since October 1955, Mr. Wild—what is your opinion of them?*

**A. "WE'RE SOLD ON FIRESTONE TUBELESS TRUCK TIRES—BEEN GETTING THEM ON ALL OUR NEW EQUIPMENT"**

*says William A. Wild, Superintendent of Maintenance, Branch Motor Express.*

Branch Motor Express of Allentown, Pennsylvania, is in the process of switching its entire fleet over to tubeless truck tires. A large common carrier serving the Middle Atlantic States, this company operates tractor-trailer units both on intercity runs and in-city pickup and delivery. For a first-hand account of why Branch Motor Express prefers tubeless tires, here's an interview with Mr. William A. Wild, the man who keeps this fleet rolling:

**Q.** *What kind of mileage are you getting with tubeless tires compared to tires with tubes?*

**A.** "We're definitely getting more miles from Firestone tubeless tires. Although we've been running on tubeless tires since October of 1955, we can't figure cost per mile yet because, you see, not one of these tires has been retired from service. However, we average 50,000 miles before retreading on the tractor drive axle tires and 100,000 miles on trailer tires and tractor front axle tires before they are retreaded. This is a remarkable improvement over tires with tubes, especially for city driving."

**Q. Is city delivery tougher on tires?**

**A.** "It is for us because that's where constant spotting of the trailer scuffs tires—but worst of all, that's where tires get curb breaks and pick up puncturing objects. The big advantage of tubeless tires here is that a break or puncture shows up as a slow leak and we repair it—but in tires with tubes, a break has to flex a hole in the tube and then—wham!—we've blown out a tire and lost a valuable tire body. We get increased tire body life for more retreads with tubeless tires. That's important to our cost picture because Firestone Factory-Method Retreading puts "new tire" tread performance on the old carcass and we get almost again as much mileage as the original—at about one-third the price of the original tire. And we can retread these tires over and over again."

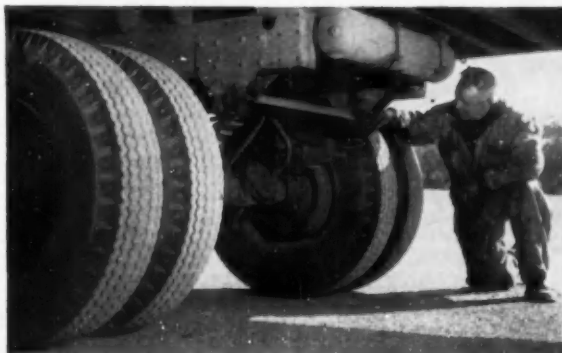
**Q. In big fleet operation, does the introduction of tubeless tires present any problems?**

**A.** "Not for us. We've standardized our rims and we can run tubed and tubeless side by side until we have completed all the replacements. We'll have all our equipment on tubeless before long. We have less valve trouble on tubeless because they run cooler out on the side of the rim. And if they do need service they're easy to get at."

**Q. From your experience, then, you'd recommend tubeless tires to other truckers?**

**A.** "Yes, I would. Anyone can save money on tire costs with them. And the way I figure it, tires with tubes on any equipment bought today may be difficult and expensive to replace, long before the vehicle has completed its useful service life."

"36,000 miles on these tractor drive axle tires, and there's another 15 or 20,000 miles left on those treads yet"—that's "Pete" Winings, Reading Terminal Shop Foreman, whose words of praise for Firestone tubeless tires sound sweet as honey to the ears of Bill Hamlin, who represents Firestone in Allentown.



"Can't remember when we had the last road call to change a flat—since we've been running on tubeless tires we hardly ever have an emergency run," recalls "Pete" Winings and he should know—he's the guy who used to have those "headaches."



SUPER ALL TRACTION



ALL TRACTION



Copyright 1956, The Firestone Tire & Rubber Co.

**Firestone**

FIRST CHOICE WITH  
TRUCK OPERATORS EVERYWHERE



SUPER TRANSPORT



TRANSPORT HEAVY DUTY

Enjoy the Voice of Firestone on radio and television every Monday evening over ABC

Continued from Page 16

Cross-firing may also occur from wires that are run parallel to each other even if no electrical leakage exists. Spread out the cables as much as possible to reduce this possibility. When arranging the high tension secondary ignition wires first consult the engine's firing order, then make sure that the wires corresponding to cylinders that fire next to each other are separated as far as possible in the loom or clip.

For example if the engine's firing order is 1-8-4-3-6-5-7-2, be sure that the wires to No. 1 and No. 8 are separated, otherwise the two may act like a transformer and the sparks in No. 1 may induce a wild spark in No. 8 and fire it on its intake stroke. You can get some very mysterious pops, sputters, misses and backfires this way.

## Distributor Cap Check . . .

**I**NSPECT the distributor cap for burned tower inserts. Look for carbon tracks between inserts or small cracks that could cause misfiring

in the cap. Check the contact between the center of the rotor and the center tower of the distributor. Check the towers of the distributor cap where the secondary cables are inserted for possible corrosion of wires that are not fully seated.

## Checking Single Drive Axle Gear Ratios

**T**HE METHOD outlined below may be used whenever it is desirable to check or verify the gear ratio of a rear axle. Two-speed axles may be checked by repeating the procedure in both high and low axle ratios.

1. Jack up a drive wheel on one side of the vehicle. Shift the transmission into neutral.

2. Mark the pinion flange or yoke of the drive unit at some convenient reference point. Mark the tire of the drive wheel that it is off the ground. Turn this drive wheel two complete revolutions noting the number of revolutions of the marked pinion flange or yoke.

The number of revolutions of the pinion flange or yoke indicates the gear ratio of this axle. For example: Two revolutions of the drive wheel and  $7\frac{2}{3}$  (7.66) revolutions of the flange or yoke means the gear ratio of this axle is 7.66:1.

When only one drive wheel is free to turn, the action of the differential gear assembly requires that the drive wheel be given two com-

(TURN TO PAGE 24, PLEASE)

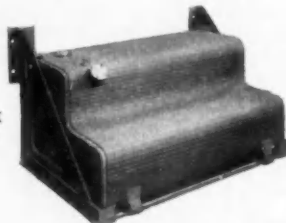
# Utilize that Wasted Space...

and by doing so increase your payload. The latest series of Snyder Safety Payload Tanks fit below the cab, eliminating the running board and thus utilize wasted space. Snyder's "Balanced Construction" insures lightweight, streamlined appearance and greater strength. All Snyder Safety Tanks are manufactured and tested to conform to Underwriters' Laboratories, Inc. and the Bureau of Motor Carriers of the I.C.C. specifications and carry a Factory Guarantee for one year.

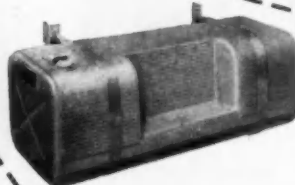
## SNYDER TANK CORPORATION

P.O. BOX 14, BUFFALO 5, N. Y. • P.O. BOX 3162, BIRMINGHAM 1, ALA.

FULL STEP TANK  
Capacity 30 to  
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Capacity 35 to 64  
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Capacity 38 to 70  
Gallons

# SNYDER SAFETY TANKS



# Salesmen give 'em a rough time

*How Superior Tea and Coffee Company  
gets best performance from its trucks  
by using STANOLUBE HD-M Motor Oil*



Jerry Bocek (right) and Jim Phelps, Standard automotive engineer check dip stick on one of Superior Tea and Coffee units. Jim Phelps has more than 29 years experience with Standard—aviation as well as automotive. Jim knows lubrication, is well qualified to give customers technical help on lube problems.

This old, established Chicago coffee company has 60 trucks—panel, sedan delivery and station wagon—plus some executive cars. These vehicles average 2,200 to 2,500 miles per month. Service includes long haul, country driving with hot engine operation as well as start-stop city driving with plenty of idling. Conditions are made more complex because operators are route salesmen not truck drivers. Jerry Bocek, the Superior shop superintendent, is the one who has to worry about maintenance, drivers don't. Jerry uses one motor oil for all units—STANOLUBE HD-M—and keeps them in top operating condition.

**STANOLUBE HD-M Motor Oil** has the ability to give superior service over a wide range of operating conditions. It helps protect the engine parts regardless of the rough treatment from the drivers. It can do these things because it is an oil designed for severe service. Oil is refined from highest quality base stock. Special additives selected by Standard have been added. These additives retard oil oxidation, minimize formation of piston and ring deposits, prevent formation of excessive varnish and sludge and prevent corrosive attack on bearing metals.

Get this high quality lubrication for your trucks. Get the facts about STANOLUBE HD-M Motor Oil from your Standard Oil automotive lubrication specialist. There's one nearby you in any of the 15 Midwest or Rocky Mountain states. Or write Standard Oil Company, 910 South Michigan Avenue, Chicago 80, Illinois.

## Quick facts about STANOLUBE HD-M Motor Oil

- 1 Refined from highest quality solvent extracted, base stocks.
- 2 Contains special additives that prevent bearing corrosion, reduce piston varnish and keep rings free to seal against blow-by.
- 3 Contains still other additives that reduce wear on heavily stressed parts.

Going over the lube schedule. Jim Phelps and Jerry Bocek hear from Standard's Tom Farrell. Tom, too, is an experienced automotive lube specialist. He has six years experience in such work. He has a degree in engineering, is a graduate of the Standard Oil Sales Engineering School.



**STANDARD OIL COMPANY**  
(Indiana)







**SAVE UP TO 700 LBS. HERE!**

*TDA Lightweight Tandem Driving Axles*

**HOW TO GAIN UP TO**  
**980 LBS. OF EXTRA**  
**EVERY LOAD-MILE FOR THE LIFE**

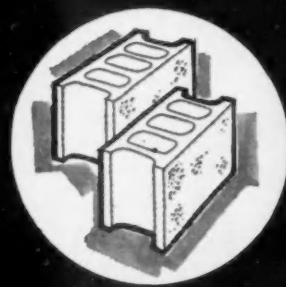
WHAT THE TDA BONUS LOAD CAN DO FOR YOU:



Haul 21 more cases of  
can goods, per load!



Haul 10 more bags of  
potatoes, per load!

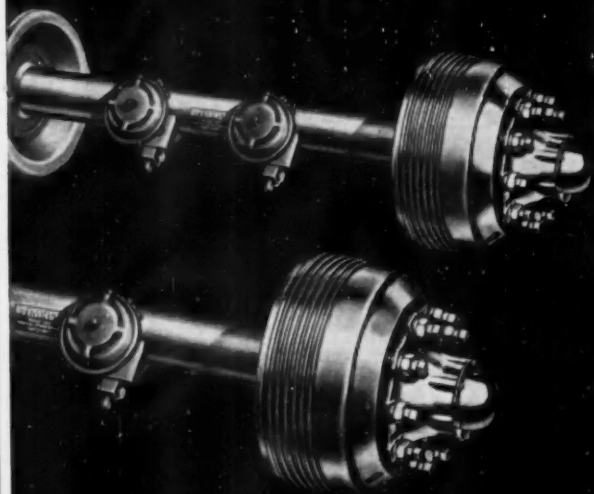


Haul 30 more cinder blocks,  
per load!

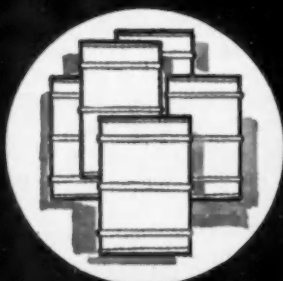
Figure your extra profit, in terms of additional ton-miles of payload!

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Haul 130 more gallons of  
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**USE THIS MONEY-SAVING  
COMBINATION OF NEW  
LIGHTWEIGHT TDA®  
TANDEM DRIVING AND  
TRAILER AXLES!**

Used together, Timken-Detroit® light-weight tandem driving and trailer axles weigh almost ½ ton less than other axles of the same capacity. This means up to 980 extra pounds of bonus payload every trip.

TDA Axles are the choice of America's leading truck manufacturers. For complete information, contact your vehicle dealer or branch today.

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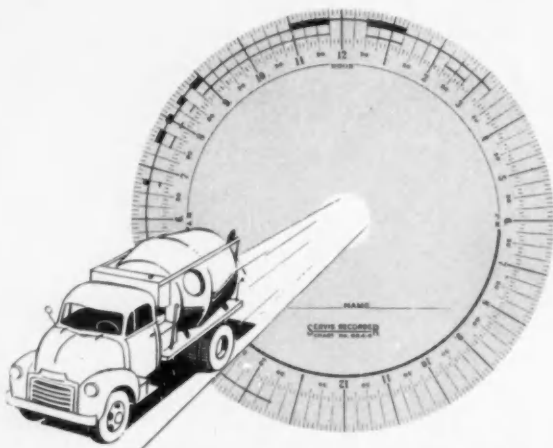
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## Will This Truck Get to its Destination Without Costly Delay?

A Servis Recorder and its permanent easily-read chart will tell you.

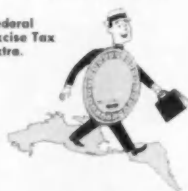
If it was delayed, then the reason can be established by following up this chart. Unauthorized delays—when, how long, how often they occur, are charted for you by tamperproof Servis Recorders. Travel time is shown, too, in this complete report of all your truck's activities—day and night!

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our experienced represen-  
tatives to call.

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**The Servis Recorder**  
Tells Every Move Your Truck Makes

**CCJ**

**AT YOUR SERVICE**

Continued from Page 20

plete revolutions to obtain the proper gear ratio by this method. Be sure all carrier markings indicate the actual ratio of the axle.

### Tandem Drive Ratios . . .

**E**XTREMELY rapid tire wear accompanied by severe scuffing, unusually high axle operating temperatures, and very low mileage gear failures may be caused by different gear ratios in the tandem driving axles. The operation of a vehicle with different gear ratios may occur when a replacement carrier has been installed in which the gear ratios have been changed, but the ratio stamping on the carrier or tag was not altered to agree with the new ratio.

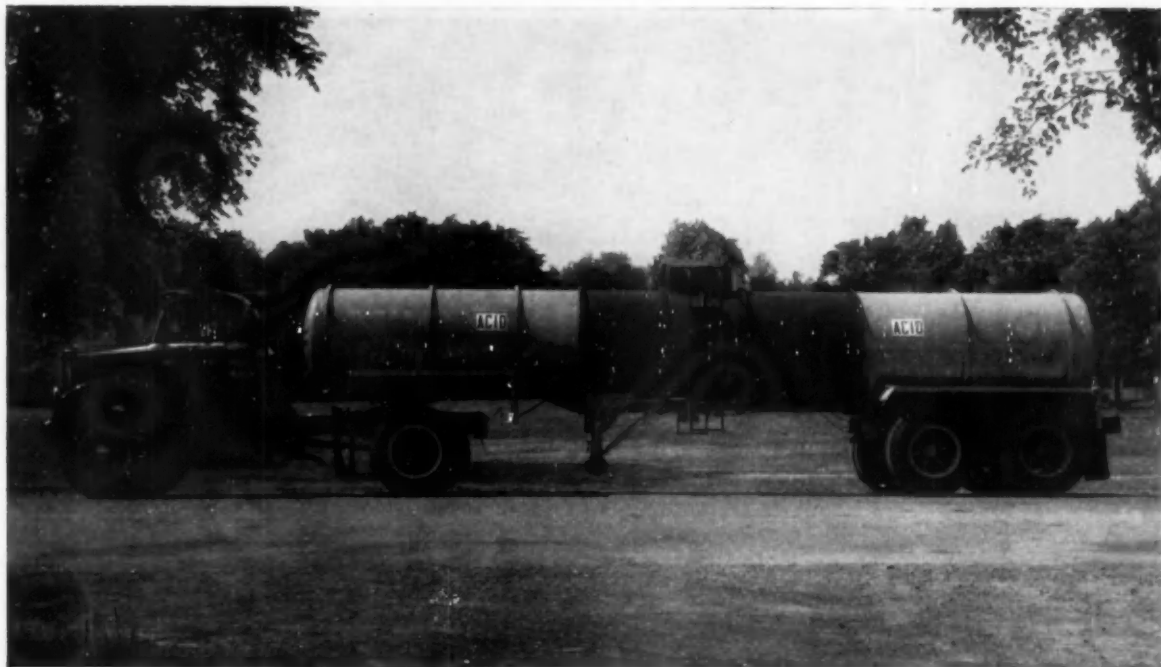
Consult the vehicle manufacturer's recommendations before changing ratios. If a change is made, be certain to alter the carrier specifications stamped on the casting or tag and the axle model "X" number stamped on the housing or tag.

Tandem units equipped with the inter-axle differential may not experience as severe wear as through drive tandems if operated with different ratios since the purpose of the inter-axle differential is to permit tandem driving axles to operate at slightly different speeds. Prolonged operation of such a unit would greatly overwork the inter-axle differential and result in early failure of the assembly.

Jack up both drive wheels on one side of the vehicle and check axle ratios in the same manner as outlined above for single drive axles. If the unit has an inter-axle differential or torque divider, lock it before starting the check.

Since both drive wheels will revolve when one wheel is turned, the marks on the drive wheels will retain their same relative positions if the axles have identical ratios; therefore, only one axle need be checked. If marks do not retain the same relative positions, ratios are not the same and the procedure must be repeated to determine the ratio of the second axle.

The gear ratios of both axles should be the same. If ratios are not identical, check vehicle specifications for correct ratio. Remove the carrier with the incorrect ratio and either replace with a carrier of the proper ratio, or convert to the proper ratio by changing gear sets as required.



## Leading tank carrier standardizes on Fuller 8-speed ROADRANGER® Transmissions

Fuller 8-speed, semi-automatic ROADRANGER Transmissions will be *standard* in all new tractors purchased by Leaman Transportation Corporation, Leaman Transportation Company, Inc. and Chemical Tank Lines, Inc. of Downingtown, Pennsylvania.

The combination of these three companies comprises one of the largest tank carrier operations in the world. Since 1930 this organization has used hundreds of Fuller Transmissions . . . and recently added 36 new R-46 ROADRANGERS in new

White and International Tractors as part of the standardization on this 8-speed model.

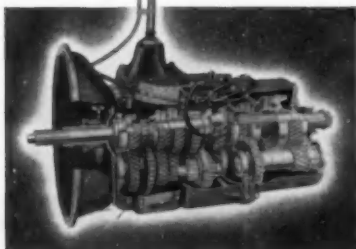
Says D. A. (Dave) Ross, Vice President: "We get the best service from the 8-speed ROADRANGERS in our operation. Some have over 150,000 miles on them, and have not been touched. Our maintenance cost is much less . . . in fact, we haven't had any cost to date since we have had *no* trouble.

"50% of all our mileage on the petroleum hauls is with an empty trailer. With the .577 ratio in the rear axle and 10 x 22 tires, we can maintain a good road speed empty in 8th

gear . . . at approximately 2000 to 2200 rpm with our gas engines. This results in better fuel mileage and better engine life. And, we are able to maintain a higher rpm at all times under a load. Our drivers now say they wouldn't have any other transmission."

For efficient, dependable operation of your trucks, ask your truck dealer now for full details on the easiest-shifting transmission available for your operation. Specify Fuller ROADRANGER Transmissions for faster trip time, lower fuel consumption, longer engine life, less driver fatigue and greater profits.

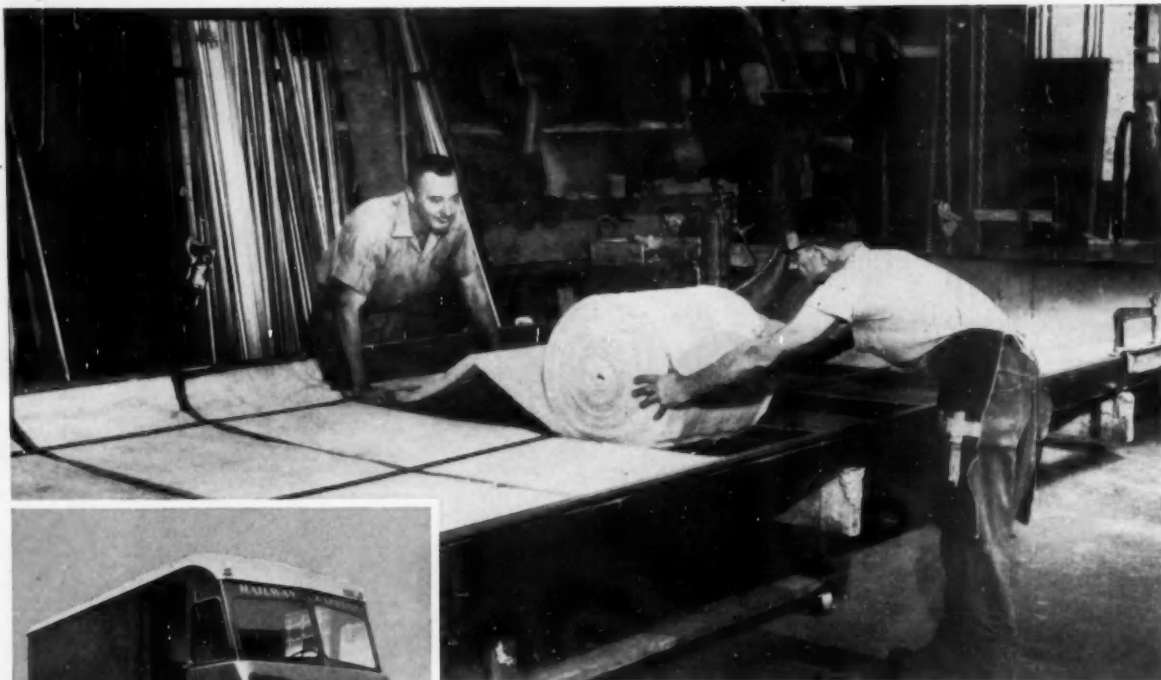
Fuller R-46  
ROADRANGER      Semi-Automatic  
Transmission



**FULLER MANUFACTURING COMPANY**  
Transmission Division, Kalamazoo, Michigan

Unit Drop Forge Division, Milwaukee 1, Wisconsin • Shuler Axle Company, Louisville, Kentucky (Subsidiary) • Sales & Service, All Products, Western District Branch, Oakland 6, California and Southwest District Office, Tulsa 2, Oklahoma.





In less than three minutes, 120 sq ft of Pittsburgh Superfine Fiber Glass insulation is cut and placed on the roof of this Railway Express truck. This Fiber Glass does not flake or chip or cause skin irritation.

Pittsburgh Superfine Insulation protects truck cargo from sun heat, provides comfort for driver, is not affected by road vibration.

## York Hoover uses Pittsburgh Superfine Fiber Glass to insulate Railway Express trucks

Railway Express trucks must withstand temperatures up to 115 F. Naturally, roof insulation in these trucks must be of highest quality.

That's why York Hoover Corporation, Body Division, York, Penna., uses Pittsburgh Superfine Fiber Glass Insulation for this job. Superfine assures cargo protection, provides comfort for the driver and does not shake loose under road vibration.

### NO MORE HANDLING PROBLEMS!

Mr. John R. Stone, Works Manager at York Hoover, reports: "Prior to using Superfine, few men out of our 500-man work force could handle the material formerly used without detrimental effects, particularly irritating skin inflammation. This discomfort caused a lowering of morale. But, the use of Superfine has eliminated this."

### PRODUCTION ADVANTAGES

"In addition to the safety and morale factor, Pittsburgh Superfine is easy to work with. It takes less than three minutes to cut and place 120 sq ft of Superfine in a Railway Express truck. Superfine has a negligible waste factor and is reasonably priced," says Mr. Stone.

### PITTSBURGH SUPERFINE CAN HELP YOU, TOO!

In Pittsburgh Superfine Fiber Glass you get an economical, easy-to-handle, safe and effective insulating material. If you're not already using Superfine, why not get complete information on how Superfine can give you many advantages? Call your nearest PPG Sales Office, or write direct. There is no obligation. *Pittsburgh Plate Glass Company, Fiber Glass Division, One Gateway Center, Pittsburgh 22, Penna.*

PITTSBURGH SUPERFINE IS A PRODUCT OF THE FIBER GLASS DIVISION OF PITTSBURGH PLATE GLASS COMPANY

Sales Offices are located in the following cities: Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh and St. Louis



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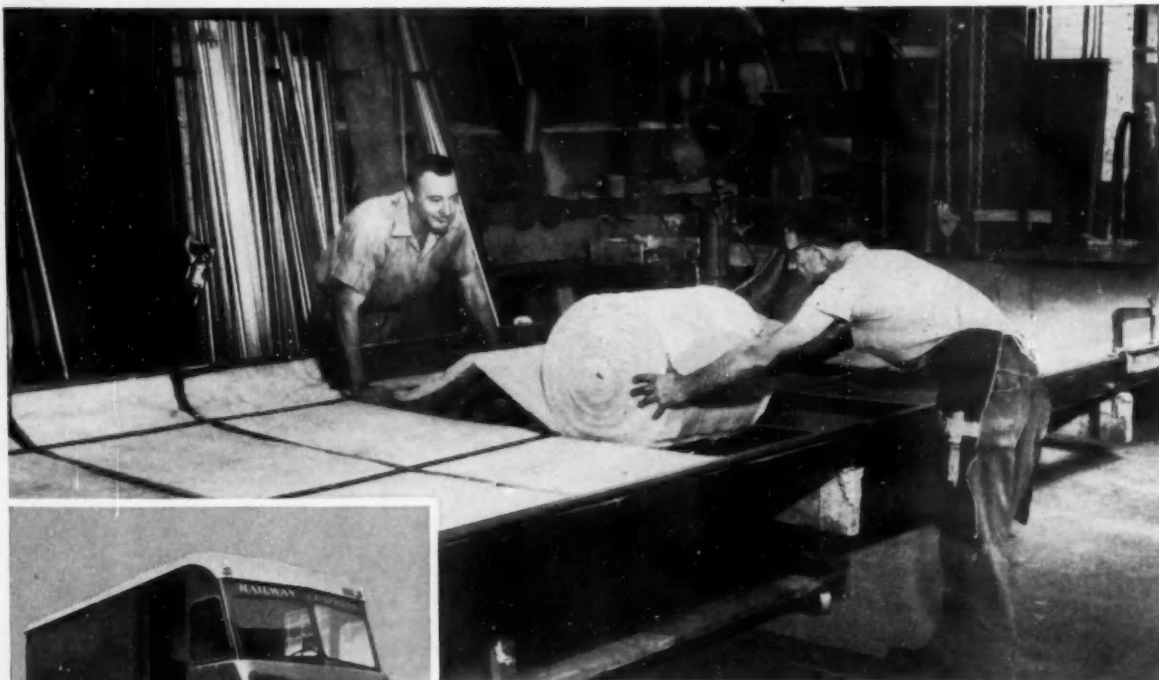
1. Your jobber inventories your fleet's oil seal needs
2. He installs and maintains custom stock of correct seals
3. He modifies stock as your equipment changes
4. You have seals when needed; no extra down time while sending out for seals
5. You get perfect replacement since National seals are original equipment seals
6. All this costs you nothing more—you get competitive prices on seals.

Call your jobber about it today



### FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.  
Detroit 13, Michigan



In less than three minutes, 120 sq ft of Pittsburgh Superfine Fiber Glass insulation is cut and placed on the roof of this Railway Express truck. This Fiber Glass does not flake or chip or cause skin irritation.

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From your National Oil Seal Jobber

## Free Custom Service for Fleet Operators



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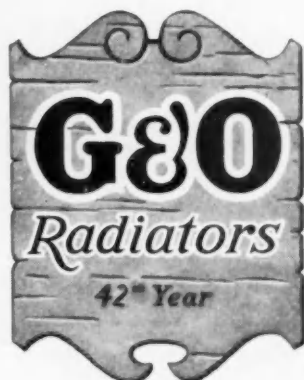
1. Your jobber inventories your fleet's oil seal needs
2. He installs and maintains custom stock of correct seals
3. He modifies stock as your equipment changes
4. You have seals when needed; no extra down time while sending out for seals
5. You get perfect replacement since National seals are original equipment seals
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Call your jobber about it today



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Detroit 13, Michigan



They're Good

**THE G & O MANUFACTURING CO.**

NEW HAVEN

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**End cold weather damage  
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INSTALL

**KIM Hotstart  
electric pre-heater**



QUICK, EASY STARTS



ELIMINATES WARM-UP TIME



REDUCES ENGINE WEAR

**KIM HOTSTART** plugs into the electric circuit when engines are not in use. It draws cold water from the engine, heats it, then circulates it back through the engine. No need for heated terminals. Engines remain warmed-up; start quickly. You don't use as much fuel and spend less on repair bills. Four KIM models are available. Installation is simple. See your automotive supplier or write for literature.

**KIM HOTSTART MANUFACTURING COMPANY**

West 917 Broadway, Spokane 1, Washington

# DATES and DOINGS

## JANUARY

- 14-18—Society of Automotive Engineers, Annual Meeting, Sheraton-Cadillac and Statler Hotels, Detroit, Mich.
- 19-23—Truck Trailer Manufacturers Assn., Annual Convention, Hotel Del Coronado, Coronado, Cal.
- 22-24—American Transit Assn., Region VI Meeting, Hotel Galvez, Galveston, Texas.
- 23-24—Executive Committee, American Trucking Assns., ATA Bldg., Washington, D. C.
- 26-30—National Automobile Dealers Assn., Equipment Exhibition, Civic Auditorium, San Francisco, Cal.
- 27-Feb. 1—Regular Common Carrier Conference, American Trucking Assns., Board of Governors Meeting, Miami Beach, Fla.
- 31-Feb. 1—Private Truck Council of America, Annual Convention, Sheraton-Jefferson Hotel, St. Louis, Mo.
- 31-Feb. 2—Louisiana Motor Transport Assn., Annual Meeting, Jung Hotel, New Orleans, La.

## FEBRUARY

- 2—Louisiana Motor Truck Assn., Annual Convention, Jung Hotel, New Orleans, La.
- 4-6—Industrial Relations Committee, American Trucking Assns., Roney Plaza Hotel, Miami Beach, Fla.
- 4-7—Automotive Accessories Manufacturers of America, Annual Exposition, New York Coliseum, New York, N. Y.
- 7—Allied Transportation Industries Assn., Hotel Syracuse, Syracuse, N. Y.
- 27-28—American Transit Assn., Region I Meeting, Hotel Statler, Boston, Mass.
- 28—Empire State Highway Transportation Assn., Hotel Statler, New York, N. Y.

## MARCH

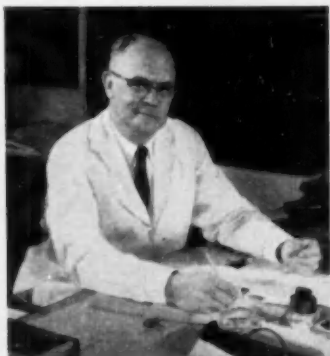
- 5-7—American Transit Assn., Region IV Meeting, Henry Grady Hotel, Atlanta, Ga.
- 5-7—Society of Automotive Engineers, National Passenger Car, Body and Materials Meeting, Sheraton-Cadillac Hotel, Detroit, Mich.
- 7-10—Pacific Automotive Show, Civic Auditorium, Seattle, Wash.
- 27-31—National Truck Leasing System, Spring Executive Conference, The Americans, Bal Harbor at Miami Beach, Fla.

## APRIL

- 2-4—American Transit Assn., Region III Meeting, Commodore Perry Hotel, Toledo, Ohio.
- 4-7—Southwest Automotive Show, Automobile Bldg., Fair Park, Dallas, Texas.
- 7-10—Western Highway Institute, Annual Meeting, Arizona-Biltmore Hotel, Phoenix, Ariz.
- 8-11—American Gas Assn.-Edison Electric Institute, Joint Motor Vehicle Committee Meeting, Rice Hotel, Houston, Texas.
- 8-12—American Welding Society, Spring Meeting, Hotel Sheraton, Philadelphia, Pa.
- 8-12—Welding and Allied Industry Exposition, Convention Hall, Philadelphia, Pa.
- 9-10—Ohio Trucking Assn., Annual Meeting, Neil House Hotel, Columbus, Ohio.
- 25-27—International Automotive Exposition, Dinner Key Auditorium, Miami, Fla.
- 26-27—Wyoming Trucking Assn., Annual Meeting, Hotel Plains, Cheyenne, Wyo.
- 28-28—New Jersey Motor Truck Assn., Annual Meeting, Hotel Berkeley-Carteret, Asbury Park, N. J.

## MAY

- 5-9—Operations Council, American Trucking Assns., Annual Meeting, Hotel Commodore, New York, N. Y.
- 9-12—Midwest Automotive Show, Kiel Auditorium, St. Louis, Mo.
- 12-15—Automotive Engine Rebuilders Assn., Annual Convention, Sheraton-Cadillac Hotel, Detroit, Mich.
- 20-24—Regular Common Carrier Conference, American Trucking Assns., San Francisco, Cal.
- 23-26—National Automotive Service Show, Commonwealth Armory, Boston, Mass.
- 28-June 2—Local Cartage National Conference, American Trucking Assns., Annual Convention, Edgewater Beach Hotel, Chicago, Ill.



**CARL W. STONE,**  
Garage Superintendent of  
Brink's Chicago Headquarters.



**"BRINK'S  
INCORPORATED  
BANKS ON AC..."**

*... just as it has since the first AC Oil Filters were produced!"*

The statement above is a direct quote from the Garage Superintendent in the Chicago office of Brink's, Incorporated. Mr. Stone speaks with authority since he has been associated with Brink's for over 23 years.

Brink's mixed fleet of over 1,000 armored cars, the largest of its kind in the world, piles up a fantastic total of over 13,000,000 miles a year. Schedules are tight . . . the stresses and strains on engines are terrific. Idling time rises to tremendous proportions. What's more, Brink's must be able to depend on engines for full performance at any and all times. All this poses special problems in truck maintenance.

***The solution? AC!***

We can't say it any better than Mr. Stone does:

"If you have clean oil, you have a smooth-running engine. That's why we use AC Oil Filters."

Why not give them a try in your trucks, too?




Watch WIDE WIDE WORLD—NBC-TV



**OIL FILTERS**



**AC SPARK PLUG**   
**THE ELECTRONICS DIVISION OF  
GENERAL MOTORS**



# ENGINEER'S FIELD REPORT

RPM MULTI-SERVICE  
PRODUCT GEAR LUBRICANT  
YAKIMA CEMENT PRODUCTS CO.  
FIRM Yakima, Washington

## No scoring or pitting of differential gears in 6 years



In Six Years of using RPM Multi-Service Gear Lubricant, not one differential in the entire 20-truck fleet of Yakima Cement Products Co. has shown any scoring or pitting of gear teeth. Despite grueling service delivering ready-mix concrete and other

building materials to off-highway construction sites, lubricant has never failed to do its job. Firm's six-wheel-drive trucks supply sand, gravel, ready-mix concrete, and fabricated concrete products to projects within 100 miles of Yakima, Washington.



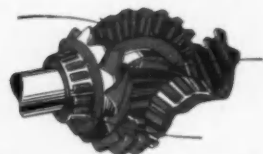
Ready-Mix Truck like rest of firm's vehicles, is rebuilt Army surplus 2½-3 ton International. "In the fleet of 21 six-wheel-drive trucks, we have never had a transmission or differential failure due to lubrication, despite our severe operating conditions since we started using RPM Multi-Service Gear Lubricant," says firm's chief mechanic, Art Weber. This lubricant is also used in all mixer drive gear boxes.



TRADEMARK "RPM DELO" AND  
DESIGN REG. U. S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20  
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey

### Why RPM Multi-Service Gear Lubricant prevents wear



•Special compound forms protective lubricating coating on gears by chemical reaction with metal...resists rubbing action of hypoid gear teeth.

•Withstands extreme temperatures and pressures...highly oxidation resistant...keeps bearings and gears cool.

•Inhibitors resist rusting, stop foaming...lubricates integral bearings...will not separate.

For More Information or field help with any fuel or lubrication problem, contact representative of any company listed or write direct.

STANDARD OIL COMPANY OF TEXAS, El Paso  
THE CALIFORNIA COMPANY, Denver 1, Colorado

COMMERCIAL CAR JOURNAL, January, 1957

# "You can drive 10 hours on this seat and not get tired!"

*Says* Kenneth King of Signal Trucking Co.



Signal Trucking Company of California, one of the nation's largest carriers, recently purchased 10 big Reo AC-703 tractors factory-equipped with new Bostrom Level Ride 80 torsion suspension truck seats. Kenneth King, winner of 9 safety awards as an outstanding Signal driver, said, "My cab now has a passenger car ride. With this Bostrom truck seat I always feel in complete control of the truck . . . even going around sharp curves and over washboard roads. You can drive 10 hours on this seat and never get tired."

Progressive trucking firms, like Signal, find that by providing the best in equipment for their drivers, employee morale stays high and driver turn-over low. By keeping drivers rested and alert, schedules are easier to meet and accident rates kept at a minimum.

Electronic tests prove that the new Level Ride 80 Bostrom seat gives a five times better ride than any other truck seat . . . actually transmits 80% less vibration to the driver. In addition to the floating action of the torsion suspension, the new Bostrom seat has five adjustable posture controls to fit all drivers, giving choice of over 400 different sitting positions to reduce fatigue.



**UNIVERSAL APPLICATION** The Bostrom Level Ride 80 is available factory installed on all major makes of trucks and as a replacement seat for every truck. See your truck dealer or truck parts distributor — TODAY!

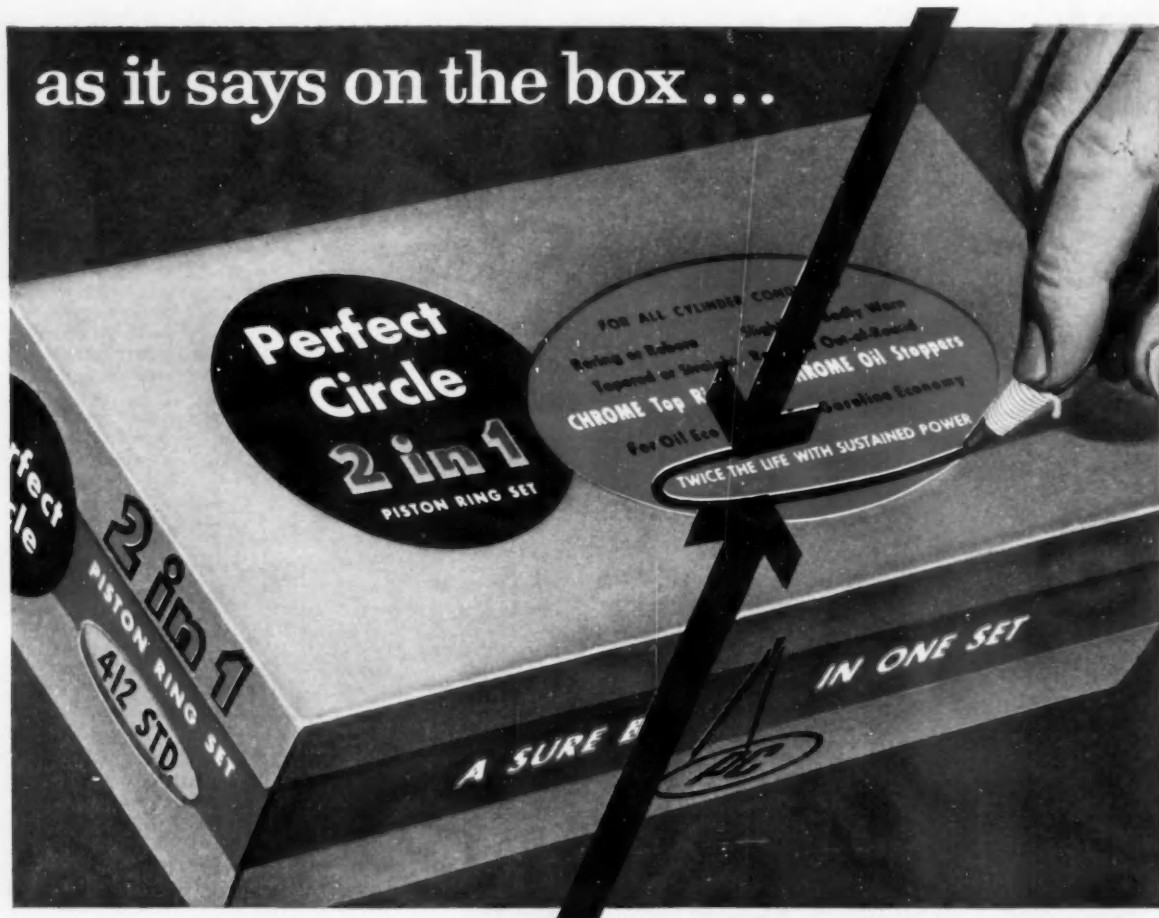


## BOSTROM

## TRUCK SEATS

® BOSTROM MANUFACTURING CO. • 100 W. OREGON ST. • MILWAUKEE 4, WIS.

as it says on the box . . .



## TWICE THE LIFE with sustained power

You're sure of double life for cylinders, pistons and rings when you install Perfect Circle 2-in-1 Chrome piston ring sets because BOTH the top compression ring and the oil ring are plated with thick, solid chrome that really resists wear!

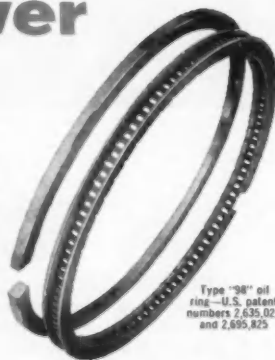
Chrome top compression ring was specially designed to perform where pressures are greatest, heat is highest, lubrication is poorest.

Type "98" chrome oil ring with self-expanding spacer assures uniform pressure against cylinder wall, plus a positive

side-sealing action on the ring groove.

Assure customer satisfaction by installing *pre-seated* Perfect Circle 2-in-1 Chrome sets for longer life and lasting oil economy! Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Don Mills, Ontario.

**Don't Miss Your Doctor of Motors Clinic:** Sponsored by your PC Jobber, the Doctor of Motors Clinic is packed with facts of great benefit to you. Don't miss your next opportunity to attend. For your added interest and enjoyment, you'll see the latest movie of the Indianapolis 500 Mile race.



Type "98" oil ring—U.S. patent numbers 2,635,022 and 2,695,825

# PERFECT CIRCLE

### 2-in-1 Chrome Piston Rings

Preferred by more people than any other brand



# UP FRONT WITH **CCJ**

JANUARY 1957 FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL

**MR. EXECUTIVE,** Circle Feb. 1 as effective date of Interstate Commerce Commission's new leasing regulations (Page 71, this issue). They supersede all previous leasing rules, are—in some respects—more liberal than earlier versions. Text of the regs is being made available by ATA's Private Carrier, Regular Route Common Carrier and Local Cartage Conferences as well as the Private Truck Council of America. There was no "last minute" postponement of the Commission's emergency brake regs (June '56, page 17). One addition is expected—a requirement that trailer stop lights be actuated when emergency stop is made (Nov. '56, page 34).

**FEDERAL TAX** on trucks with over 26,000 lb "taxable gross weight" was spelled out in final form on Dec. 6. Basic provisions are the same as reported by Commercial Car Journal last month (page 116). In addition to transit bus exemptions, the expanded rules take single trucks of less than 13,000 lb unladen weight out of the taxable category, eliminate the 75,000-lb class for "pole and other special" trailers, and exempt certain "special equipment" in figuring unloaded weight. Privately or publicly - owned vehicles used by the United States Government are exempt from the tax, says the Treasury Dept. End of this month is deadline for first return.

**CONVENTIONS** hit the big time this month. Society of Automotive Engineers (Jan. 14-18, Detroit) will consider nuclear power for automotive use as well as such down-to-earth topics as fuel injection, truck refrigeration and diesel performance. Truck-Trailer Manufacturers Assn. meets Jan. 19-23 at Coronado, Cal. One major highlight is "TTMA Meets the Press" in which CCJ's Editor Bart Rawson will participate. For construction fleet operators, the American Road Builders' Assn. convention and Road Show (Jan. 28-Feb. 2 in Chicago) will be one of the most important of the year. (It's previewed on page 72, this issue.) It's "Meet me in St. Louis" for Private Truck Council of America members. One feature of their annual meeting (Jan. 31- Feb. 1) is a panel discussion on how railroads and motor common carriers as well as other groups view private truck operation.

**AUTO-TRUCK** show in New York was an unqualified success. That's the consensus from both Automobile Manufacturer Assn. and individual company officials. There was a pre-show agreement that attendance figures would not be released, but an inside source reveals attendance was more than double any previous national show. More important was the larger proportion of potential buyers than had been expected. No company was giving out positive sales-result figures, but most agree it was a "selling show." Repeat performance in December this year or January 1958 is almost a certainty, probably in New York City.

# DETROIT DISPATCH

**TUBELESS TIRES** get a thorough working over on page 82 of this issue. Meanwhile from an authoritative source comes interesting speculation on the future of nylon tires. Now standard equipment on all heavy-duty trucks, they may be standard on all vehicles by 1960.

**FUEL INJECTION** got another shot in the arm last month when Pontiac and Rambler announced it as an available option on certain specific models. The Pontiac unit is presumed similar to Chevrolet's (page 84, this issue). Rambler will use the Bendix product. Meanwhile Holley Carburetor jolted the industry with a fuel injection model reported to sell for "around \$100."

**FORD'S** tilt-cab COE (page 86, this issue) caused much favorable comment at New York show—Ditto the little COE offered by Willys (Dec. page 82).

**DODGE**, pleased by interest in its  $\frac{3}{4}$ -ton forward control chassis built for the

Post Office, will soon add two such models to its  $\frac{1}{2}$  and  $\frac{3}{4}$ -ton lines. Bodies for the 95-in. drop frame chassis will be built by Boyertown Auto Body Works. Dodge is also planning 4-wheel drive for  $\frac{1}{2}$  and  $\frac{3}{4}$ -ton models as a factory installed option.

**POWER-LOK** differential, previously available only as factory installed option, can now be had in kit form. Dana's Spicer Thornton division says the kit provides easy conversion from standard units in field shops. (For a description, see page 102, Mar. '56.)

**INTERNATIONAL HARVESTER** unveiled a new semi-automatic transmission with built in torque convertor (page 108, this issue) at the New York Auto Show. Harvester also reports that automatic radiator shutters are now available as factory options on all gasoline-powered models in 21,000 to 45,000 lb GVW range.

**ALUMINUM TANKS** for transporting flammable liquids have received the

## WASHINGTON WATCH

**CONGRESS** faces a substantial backlog of measures affecting highway transportation. Chief among them will be legislation to implement the highly-controversial Cabinet Committee recommendations on transportation policy.

**RAILROADS** undoubtedly will press for such measures. But it is apparent that the rails' effort will be along more modest lines, far short of the full proposals of the Cabinet Committee. By concentrating on fewer objectives they believe chances for action are increased. Truckers may face a tougher battle.

**TRANSPORTATION TAX** will be under heavy fire from all quarters. Repeal, urged in 1956 by both carriers and shippers, stands only a small chance of being voted this year. It will be strenuously opposed by Treasury Dept., always reluctant to lose revenue.

**RECORDING OF LIENS** is another hot issue. Scarcity of credit, particularly for

small business, will bring added support from carriers. The White House staff is known to be fairly well in accord with the need for a law that is more practical than present system.

**TRUCK-TRAILER** users are hoping for a bill to include trailers as "highway vehicles" as defined by Motor Vehicle Theft Act.

**HIGHWAY SAFETY** will be the subject of an extensive two-year study begun last month by the Bureau of Public Roads under direction of Charles W. Prisk, a staff member. The study was authorized by last year's Federal Highway Act. Among other things, it will explore the possibility of Federal-aid to state and local governments in the enforcement of highway speed and safety requirements.

**SAFETY HEARINGS** by the House will also be resumed after Feb. 1. Postponed last November by the death of Chairman Priest, it is expected that the study will be continued by the Roberts' sub-



blessings of the National Fire Protection Assn. ATA's National Tank Truck Carriers, Inc. reports that NFPA's flammable liquids committee had been worried, now agrees that "aluminum creates no special hazard."

**14-IN. TIRES** will be this year's focal point for the National Safety Council's Committee on Winter Driving Hazards. Pine Lake tests at Clintonville, Wis., this month, will compare their traction and skidding characteristics with those of the larger tires. Tests will include both regular and snow treads, as well as vehicles with chains.

**LIST PRICES** on Chevrolet and GMC trucks are up between \$25 and \$28. Cost to consumer may not go up in proportion. New prices include all advertising. Under old system dealers paid the local bill, added the cost to selling price. General Electric also announced price increases on mobile radios. But Hall-Scott says prices on its big gasoline engines are down \$176 to \$467.

committee of the House Commerce Committee.

**EFFECTS OF** the Federal Highway Act of 1956 will be watched closely, but major new legislation in the road construction is unlikely this year. However, a bill to establish a Federal Highway Commission to administer the new road program will be reintroduced by Senator Gore.

**DAMAGE SUIT** between railroads and truckers produced only one important news highlight last month. As railroads swung into their "innings" (Dec. '56, page 33), Federal Judge Clary denied admission of any evidence that "trucks break up the roads". A bevy of experts had been lined up for this line of attack but the judge ruled it irrelevant.

**OWEN CLARKE**, ICC Commissioner from Yakima, Wash., has been named chairman of the Commission for a one-year term. He succeeds Commissioner Arpaia under the long-established policy of rotating the chairmanship.

## TRUCK TONNAGE

**OCTOBER** 1956 intercity general freight tonnage was up 7.9 per cent over October 1955 and 15.7 per cent over September 1956, reports American Trucking Assns. Research Dept. It brings freight volume for the first 10 months of 1956 to a full 5.0 per cent ahead of the first 10 months of 1955. Biggest gains in October 1956 as compared to October 1955 were registered in the Rocky Mountain, Middle Atlantic and Pacific regions. ATA's third quarter truck loading index stood at 166, same as 1955's third quarter record (Third quarter tonnage by regions and by commodity groups appears on page 170, this issue.) Top tonnage regions in the third quarter were Pacific, New England and Southwestern.

Month	% Change from Previous Month	% Change from a Year Ago
October, 1956.....	+15.7	+ 7.9
3rd Quarter, '56.....	.....	+ 0.4
September, 1956.....	- 6.5	- 6.6
August, 1956.....	+12.7	+ 1.3
July, 1956.....	.....	+11.2
2nd Quarter, '56.....	.....	+ 5.6
June, 1956.....	- 0.9	+ 5.9
May, 1956.....	+ 5.5	+ 6.4
April, 1956.....	- 5.2	+ 0.9
1st Quarter, '56.....	.....	+ 7.9
March, 1956.....	+ 6.8	+ 1.4
February, 1956.....	- 1.0	+12.7
January, 1956.....	+ 3.4	+12.9
4th Quarter, '55.....	.....	+16.1
December, 1955.....	- 6.3	+11.9
November, 1955.....	- 0.9	+17.0

## TRUCK AND BUS PRODUCTION

Make	For Weeks Ending				Total Jan. 1 to Dec. 15, 1956
	Dec. 15	Dec. 8	Dec. 1	Nov. 24	
Available.....	7	5	6	5	352
Chevrolet.....	9,729	7,681	7,023	5,373	340,683
G. M. C.....	1,727	1,761	1,940	1,168	87,280
Diamond T.....	84	86	77	64	4,947
Divco.....	80	80	80	48	3,448
Dodge and Fargo.....	2,022	2,001	2,686	1,626	87,747
Ford.....	6,067	6,095	6,166	4,668	281,917
International.....	3,393	3,420	3,314	2,296	132,046
Mack.....	394	378	351	273	17,550
Reo.....	90	52	50	51	3,728
Studebaker.....	401	347	455	282	14,636
White.....	314	309	305	238	16,652
Willys.....	1,589	1,794	1,819	1,162	61,639
Other Trucks.....	88	100	113	93	7,436
Total—Trucks.....	28,005	24,108	25,204	17,353	1,070,412
Buses.....	65	79	39	34	4,042
Total—Trucks and Buses...	28,070	24,187	25,243	17,387	1,074,454

Source: Automobile Manufacturers Assn.

## IN THIS ISSUE

**TRANSIT** fleet operators will find four ways to **AIR CONDITION** a **BUS** plus a summary of the experience of seven properties (page 66).

The future of **ELECTRICAL EQUIPMENT** is discussed by four experts with an eye to solving some of today's problems (page 74).

Frisco Transportation's Tulsa (Okla.) Division has a fleet-built **CRASH WAGON** it calls a "Mule" with a 30,000-lb lift to the rear (page 80).

Here are a series of questions and answers that round-up the first year's general fleet experience with **TUBELESS TRUCK TIRES** (page 82).

# The Road Ahead



**FOR 1957**, truck tonnage—private as well as for-hire—will run about the same as in 1956. Some particular fleet groups will be busier than ever. For example, the nation's construction fleets will be hard at work on a record highway building program. On the for-hire trucking side, gross revenue of ICC carriers will reach \$6 billion or more by the end of this year. Higher if rate increases go into effect.

**CONCERNING HIGHWAYS.** The Associated General Contractors of America says, "Highway construction, under the first-year impetus of the long-range highway program authorized by Congress, may push to approximately \$5.8 billion, a 14 per cent increase over 1956."

**DEMAND FOR TRUCKS** will be about 900,000 units says General Motors President H. Harlow Curtice, as compared with the estimated 1.1 million trucks produced in 1956. Mack Trucks President P. O. Peterson boosts this conservative estimate with, "Even though 1956 appears to have smashed all existing records in the sale of larger trucks, 1957 should be even better. If world peace prevails, 1957 cannot help but to be a boom year for the trucking industry."

**ON THE TIRE** side, United States Rubber Co. President H. E. Humphreys, Jr., predicts that, "Truck tire replacement sales will be the same or slightly lower than the 8½ million units we estimate for 1956."

**TAX REDUCTIONS** are not likely this year. Federal-aid highway expenses are at a record high and headed higher. They preclude chances of a drop in federal highway-use taxes. National defense needs center around technically complicated higher cost weapons. This alone tends to keep federal income taxes at their present level. Bright spot is that federal taxes probably won't be increased.

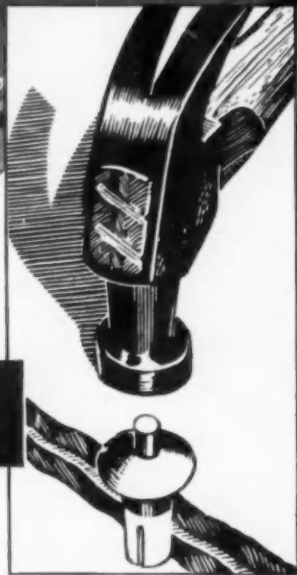
**STATE TAXES** can be expected to increase. Lucky is the truck operator who finds himself in a state that doesn't need more revenue—both for general purposes and for highway building. Also in the legislative mill on the state level are compulsory liability insurance (it can benefit fleet operators), higher insurance requirements and wider adoption of the Uniform Vehicle Code.

**AS 1956** entered its last quarter, here's how production of major commercial vehicles and tires stood at the 10-month mark:

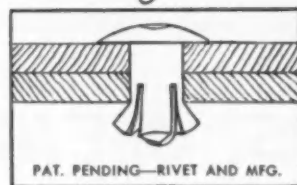
In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires				
									Replacement Shipments		Original Equip. Shipments		Inventory End of October
	October	10 Months	October	10 Months	October	10 Months	October	10 Months	October	10 Months	October	10 Months	
1956	76.1	761.7	77.5	754.2	6.5	58.0	291	3326	849.2	7684.9	377.9	3909.6	3169.0
1955	87.3	787.7	81.4	667.5	7.0	62.2	385	2853	903.7	7814.7	323.5	3993.6	2356.9



**LIKE DRIVING A NAIL**



*it's easy riveting*



Southco Drive Rivets provide better fastenings and lower fastener costs. Just tap in the pin. It's as easy as that, and fast. A one man job—no bucking-up. An ordinary hammer is the only tool. The "pull-up" is perfect. There's no finishing, grinding, trimming. Southco Rivets are tough, hold securely, can't work loose even under severe vibration.

Wherever rivets are used, for securing heavy truck panels, or delicate instrument assemblies, metal to metal or metal to wood, use Southco Drive Rivets for speed, for low cost, for secure fastenings. Ask for complete data. Southco Div., South Chester Corp., 228 Industrial Highway, Lester, Pa.

**SOUTHCO**

**FASTENERS**

©1956

**LION**



## '57 CHEVIES TURNED THE TOUGH

They took the "teeth" out of North America's  
toughest truck run in an amazing display of  
stamina and dependability! The Chevrolet  
Alcan test called for great truck com-  
ponents . . . and here they are, the same  
modern features you'll get in *your* '57 Chevy!

*Modern high-compression 6's*—a time-proved Chevrolet truck Thriftmaster 6 made the tortuous Alcan Highway test look easy . . . registered a high 18.17 miles per gallon! And Chevrolet truck 6's are the *most powerful* in their class!

*Short-stroke V8's* standard or optional for all models—with the shortest stroke of any truck V8's these new Chevy engines stand first in their field for efficient load-pulling! Their round-the-clock performance in Alaska proved it!



## ALCAN HIGHWAY INTO A TURNPIKE!

*Safe, sure brakes now Alcan proved*—in light- and medium-duty models, Hydrovac power brakes\* supplied up to 85% of the braking effort! Powerful Air-Hydraulic brakes\* gave peak stopping power in heavy-duty models!

*Unit-design cab and body construction*—Chevrolet truck cabs and bodies remained tight and solid on Alcan bumps, showed that they're built to last!

*Rugged Synchro-Mesh manual transmissions*—they displayed never-say-die durability . . . came through with smooth, flexible, trouble-free performance throughout the entire 1,520-mile run!

*Easy-going Hydra-Matic transmission\**—it reduced driver's work immeasurably in light-duty models and it saved wear on drive-line parts, too!

*Revolutionary Powermatic transmission\**—Drivers of heavy-duty models reported shift-free driving ease on Yukon grades, safer downhill hauling with the hydraulic retarder!

*Sturdy frames and long-leaf springs*—these brawny chassis components proved they can take it when the going is roughest . . . took the Alcan's worst with strength to spare!

These Alcan-proved Task-Force 57 features and others like them (such as extra-heavy rear axles, mighty Triple-Torque tandem options, new, improved tubeless tires and easy-rolling Ball-Gear steering) are ready to tame your tough truck runs too! Boost your hauling profits by seeing your Chevrolet dealer soon! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

*\*Optional at extra cost.*

## 1957 CHEVROLET TASK-FORCE TRUCKS

PROVED ON THE ALCAN HIGHWAY...CHAMPS OF EVERY WEIGHT CLASS!





# "For fast forwarding of freight, from flowers



**Big new warehouse** permits rapid, indoor transfer of freight from highway trailers to Ellis trucks. Operations include regular package

delivery, warehousing and order filling service, and special 3-hour delivery, heavily relied on by florists and others with rush shipments.



**Peter P. Ellis** actively heads the firm that dominates Detroit-area package delivery. Starting in the cartage business at 16, he later pioneered 3-hour delivery idea, runs safe-driver classes for his neatly uniformed drivers.

**It's planned pandemonium** 3 times a day as packages are sorted for 3-hour delivery. To help ward off crippling engine failure, Ellis picks dependable Champion Spark Plugs.



C H A M P I O N   S P A R K   P L U G

COMMERCIAL CAR JOURNAL, January, 1957

# to speedboats, we choose Champions,"

*says Fleet Superintendent Robert Novak, of Detroit's Peter P. Ellis Delivery Systems, which guarantee 3-hour service from pickup to delivery with a 55-mile radius.*

"It's Champions for PEP," reports Robert Novak, fleet superintendent of Detroit's Peter P. Ellis Delivery Systems. "We handle all types of package freight and guarantee 3-hour service from pickup to delivery. In order to live up to our trademark-monogram 'PEP,' which stands for Prompt Efficient Performance, as well as the company's initials, we need the best of everything for our 188-truck fleet. That's why our spark plugs are Champions.

"With so much start-and-stop city driving, plug fouling could be a big problem. With Champions, we lick that problem—and get a bonus of all-around top spark plug performance."

Whether your operation is in-city delivery or over-the-highway hauling, you will get peak plug performance—efficient and economical—when you equip all your units with full-firing Champion Spark Plugs, with the new Powerfire electrode.



**Fleet superintendent Robert Novak** heads 11-man force that keeps 188 trucks rolling. Fleet includes all major makes, uses Champions to combat fouling danger.



**Loading parcels** for delivery. Items handled include furs, flowers, false teeth, toys, X-ray film, Yule trees, bags of coffee, speedboats, toboggans, and TV tubes.



**Rush freight** is unloaded onto specific tables according to its destination, then driver loads truck from his table for completion of 3-hour delivery cycle.



Dependable 5-rib

**CHAMPION**

SPARK PLUGS

COMPANY • TOLEDO 1, OHIO

COMMERCIAL CAR JOURNAL, January, 1957



# Laugh it off!

Safety Sadie: "Cora, Honey, you've got two fairly steady boy friends on the string. Which one are you gonna' hitch to?"

Catty Cora: "I really don't know, Susie. Gee, if I could only combine their qualities I'd be the happiest girl in the world. Ronnie is gay, debonair, rich, handsome and witty. Elmer wants to marry me."

ccj

Pretty Diner Cashier: "I need a vacation, boss. I'm not looking my best."

Diner Operator: "Stuff and nonsense."

Pretty Diner Cashier: "It isn't nonsense. The truck drivers are beginning to count their change."

ccj

Truck Driver (banging on table): "The service here is lousy. Look at my glass, it's empty. What have I got to do to get some water?"

Diner Waitress: "Why don'tcha try settin' fire to yourself, Mac?"

ccj

Senior Truck Driver: "Did you follow my advice about kissing your girl when she least expected it?"

Junior Truck Driver: "That explains everything. No wonder I'm sporting this black eye. I didn't know you said 'when.' I thought you said 'where.'"

ccj

Nagging Wifey: "You don't deserve a woman like me."

HiLo Operator: "I don't deserve sinus either, but I got it."

Cici Jay says: "The lines of a girl's palm may foretell her future. But only the lines of her figure can make it come true."

ccj

Terminal Manager: "You're thirty minutes late again. Don't you know what time we start work in this establishment?"

Freight Checker: "No, sir. They're always working when I get here."

ccj

The tank fleet operator was about to undergo a serious surgical procedure. The doctor bent over the operating table and said to him: "I'm going to be frank with you. Only four out of five persons recover from this operation. Before I proceed, is there anything you would like me to do?"

"Yes," said the fleet operator, "help me on with my clothes and shoes."

Cici Jay



"See you at lunch. I gotta get back to work!"

Safety Sadie: "Cora, hon, your dog keeps acting so strangely. Why does he keep turning around and 'round in circles?"

Catty Cora: "He's a watch dog—and he's winding himself up."

ccj

Fleet Auditor: "Simpson, I want to congratulate you for attending night school. Hard work and continuous study is the way to get ahead. What subjects are you taking?"

Payroll Clerk: "Business English, Typing and Commercial Arithmetic." Fleet Auditor: "How are you getting along with the arithmetic?"

Payroll Clerk: "Not so good, I guess. My instructor said I didn't know math from a hole in the ground."

ccj

The Traveling Freight Auditor dashed home and in a loud, angry voice said: "Miserable Woman! I know everything now!"

"Don't brag so," his wife remarked calmly. "When was the battle of Gettysburg?"

ccj

LEADFOOT LOUIE SAYS: "AN ACCIDENT IS AN EVENT THAT, FIVE MINUTES AFTER IT HAPPENS, ANYONE CAN SEE HOW IT COULD HAVE BEEN AVOIDED."

ccj

Fleet Superintendent: "If I had a million bucks do you know where I'd be right now?"

Cuddlesome Cutie: "You'd be on our honeymoon."

Resume Work



**TUBE or TUBELESS . . .**

## Add "flat catching" to your routine pit procedures

Flats on the highway make overhead soar. Many fleet owners are saving money by catching flats before they happen by using accurate Schrader gauges. Regular daily gauging shows up slow leaks . . . the signal of a future flat. This lets them fix tubes and tires in the shop during regular maintenance hours, when it's cheap. Flats during runs are minimized.

This plan is even more effective when you use Schrader Air Chucks, Couplers, Chuck Gauges and Accessories for faster, better operating air lines. The Schrader 7188BH All-Purpose Service Gauge is best for all tire inspection work, and the accuracy of your gauging-inflating equipment can be certified with a Schrader 8106B Trutest Special Gauge. It pays to specify Schrader products from your supplier, whether it's caps, cores, tube or tubeless valves or anything needed for fast, accurate air service.

**Schrader Products**  
important to best tire maintenance



8106B for checking all other gauges



7188BH All-Purpose Service Gauge



New 3650 Type Chuck Gauge



7612 Heat-Resisting Cap



7611 Heat-Resisting Core

**A. SCHRADER'S SON**  
Division of Scovill Manufacturing Company, Incorporated  
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

**Schrader®**  
ESTABLISHED IN 1844

**FIRST NAME IN THE SAFEST TIRE VALVES**  
**FOR ORIGINAL EQUIPMENT AND REPLACEMENT**

# Here's why McLean's





# back for 85 more!



**N**O mystery about it. McLean Trucking Company's five years and 185 million miles of GMC experience have proved these trucks' ability to give standout performance—at amazingly low operating figures.

So they've just ordered 85 DF862 GMC's, with the famed 6-71E 2-cycle Diesel engine, making it 205 new GMC's for the year—and 556 tractors for the whole fleet.

*In McLean's fleet—and others the country over—GMC trucks have cut maintenance and fuel costs as much as 9% below competitors' haulers. Even in 100,000-mile-a-year service, McLean schedules major overhauls approximately 2 years apart. And its road equipment availability factor averages an exceptional 94%.*

The DF862 not only saves more, it earns more, too. For a 72-inch cab—only 96 inches in sleeper versions—lets you swing a square-nosed 35-foot trailer in 45-foot states. And extra tonnage is distributed over oversized axles: 11,000 lbs. front and 22,000 lbs. rear.

So it's easy to see how fleets like McLean's are chalking up so much extra-profitable mileage—at such remarkable low costs. To find out what DF862 cost-cutters could do for you—see your GMC dealer!

**GMC TRUCK & COACH**

*A General Motors Division*



## Don't Skid Yourself

When you can't start, there you are. But when you can't stop, where are you?

Don't (s)kid yourself, buddy. In this winter weather, if you can't stop — and stop safely — you're strictly nowhere. Maybe you can ease up when your cutie gives you the cold shoulder, but when you hit a cold shoulder on the highway you're liable to go all the way.

The smartest thing you can do in this weather is Slow Down. Give other drivers lots of room. Then you'll have time to stop if they goof.

Here are some more tips to help you stay out of trouble:

- Use tire chains and good tires on snow or ice-covered roads.
- Get the "feel" of the road to find out just how slippery it is.
- Keep the windshield clear, inside and out.
- Use sanders for low-speed traction.
- "Fan" or "feather" your brakes—Don't lock or spin your wheels.
- If the rig's empty, be extra cautious when you apply your brakes.
- When you gear down, watch out for excessive slipping of the drive wheels.

That's the first stage of a jackknife.

One last point: Take it easy when it's wet and slushy, especially in the city. The gal whose nylons you splash might be the boss's wife. Or the wife you save might be your own.

# 8,000,000 miles of service prove Gates "T" Belts cost less per mile



The Gates Rubber Co.  
Denver, Colorado

Dear Sirs:

A year ago we switched over 100% to Gates "T" Belts. In that time, we have noted that they cost less per mile and wear far longer than other belts we have used in the past. This means, of course, that our road delays due to belt failure are practically eliminated.

Yours truly, *James Aiello*  
James Aiello,  
Fleet Supervisor



## ...wear longer...cut road delays

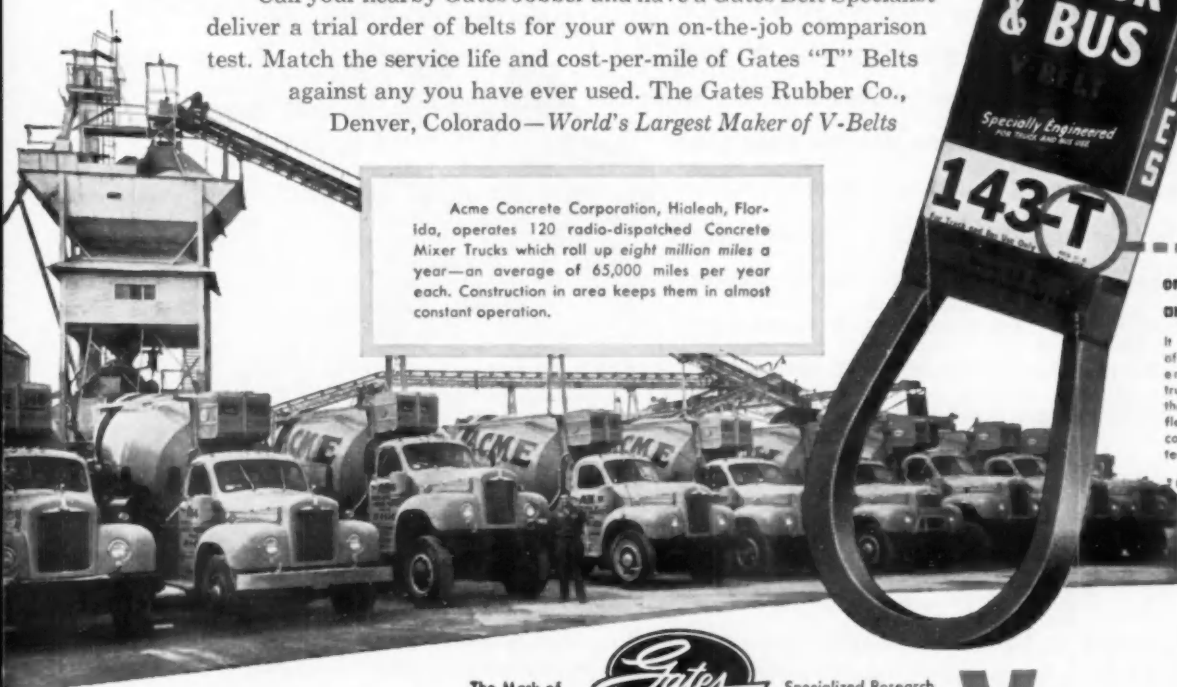
Construction firms depend on concrete companies like Acme, for deliveries spaced and timed for continuous concrete pours. Delays can result in "cold pours" and faulty construction.

Like Acme, fleet operators all across the country choose Gates "T" Belts to cut costs and to eliminate road delays due to belt failure.

## make this test

Call your nearby Gates Jobber and have a Gates Belt Specialist deliver a trial order of belts for your own on-the-job comparison test. Match the service life and cost-per-mile of Gates "T" Belts against any you have ever used. The Gates Rubber Co., Denver, Colorado—World's Largest Maker of V-Belts

Acme Concrete Corporation, Hialeah, Florida, operates 120 radio-dispatched Concrete Mixer Trucks which roll up eight million miles a year—an average of 65,000 miles per year each. Construction in area keeps them in almost constant operation.



Look  
for this

**T**

on both the belt  
and the label

It is your assurance of the belt specially engineered for trucks and buses—the belt with a tough flexible cover and cords of extra high tensile strength.

REG. U.S. PAT. OFFICE

TPA 119

The Mark of



Specialized Research

# GATES TRUCK & BUS V-BELTS

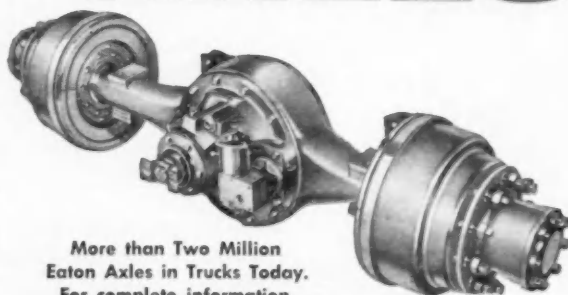
# simple shifting



- 1 proper use of all available gear ratios
- 2 easier handling rigs; better maneuverability
- 3 reduced driver fatigue; safer operation

Eaton 2-Speed Axles not only let drivers select from TWICE the conventional number of gear ratios, but they make these ratios available at finger touch. Result: drivers use the right gear ratio for every road and load condition; engines operate in their most economical speed range; stress and wear are reduced on all power-transmitting parts. Trucks cost less to operate and maintain; last thousands of miles longer; and bring higher allowances at trade-in time.

## EATON *2-Speed Truck* AXLES



More than Two Million  
Eaton Axles in Trucks Today.  
For complete information,  
see your truck dealer.

# EATON

AXLE DIVISION  
MANUFACTURING COMPANY  
CLEVELAND, OHIO



**PRODUCTS:** Engine Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Hydraulic Pumps  
Motor Truck Axles • Permanent Mold Gray Iron Castings • Forgings • Heater-Defroster Units • Automotive Air Conditioning  
Fastening Devices • Cold Drawn Steel • Stampings • Gears • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

# BCA CLUTCH BEARINGS

give up to **3 TIMES** "expected" life!



## Tests prove it!

Automotive engineers expect clutch bearings to be good for 70,000 to 80,000 declutchings. Tests prove that BCA clutch bearings are good for more than 200,000 declutchings at speeds corresponding to 50 to 60 miles per hour!



Leading fleet superintendents specify BCA bearings. There's good reason why. BCA bearings stand up longer in the clutch!

- ▶ BCA clutch bearings are specifically designed for automotive replacement service. They are made to original equipment specifications.
- ▶ Precision high-carbon chrome balls, precision-ground carburized steel washers, and unique carrier assembly form a perfectly balanced design that assures correct running and smoother operation at all speeds.
- ▶ There's no need for relubrication. The bearing is filled with a highly refined lubricant that remains stable at high temperatures. Ample lubricant space provides a more than adequate reservoir. Lubricant is accurately metered to each bearing.
- ▶ Special bronze ferrule minimizes friction and wear on the carrier nose.

Next time, put in BCA "Triple-Life" Clutch Bearings. It pays.



### Federal-Mogul Service

(Division of Federal-Mogul-Bower Bearings, Inc.)  
DETROIT 13, MICHIGAN

Get the bearings you need WHEN you need them.  
Call your Federal-Mogul Service jobber.



# Fleetman's

# LIBRARY

FOR FREE ITEMS INCLUDED IN THIS REVIEW OF CURRENT MAINTENANCE AND SAFETY PUBLICATIONS, USE READER SERVICE POSTCARD ON PAGE 52

## LP-Gas Engine Review

Here's a handy booklet from the Texaco Co. It is a comprehensive review of LP-gas engine fuel and lubricant requirements. It opens with analysis of just what is LP-gas and how it compares with gasoline, diesel fuel, etc.

From this beginning, it describes LP-gas automotive systems with emphasis on the part pressure plays in their operation. Of interest in this section also are several schematic diagrams and actual photographs of LP-gas systems and components presently available.

Next is a discussion of the effects of LP-gas on engine performance and design—fuel intake, ignition, fuel consumption — including several interesting charts. Last section of the booklet is devoted to lubrication of LP-gas engines and choice of best lubricant.

For your free copy of this LP-gas review, circle L 1 on the postcard on page 52.

## 12-Volt Electrical System Manual

This just-off-the-press manual from Delco-Remy covers maintenance and service on 1957 12-volt models. Special attention is given to the new external adjustment type distributor and the enclosed shiftlever type cranking motor as found on Delco-Remy equipped passenger cars.

There's an entire special section devoted to such extra-power equipment as the AC generator system with power rectifier, dual and piggy-back generator installations, extra-duty generators, etc. Entire manual is fully illustrated with easy-to-understand drawings and charts.

For your free copy, circle L 2 on the postcard on page 52.

## Brake Safety Booklet

"The Three Vanishing Killers" is about the same size as a two bit pocket mystery—and just as interesting. It clears up the mystery of fadeout brakes, secondary fade brakes and vapor lock brakes.

It is an excellent treatise on the importance of quality brake products—fluid, lining, drums, etc.—in automotive operation. It also points out the need for continual maintenance to keep brakes in top operating condition.

For a copy of this 40-page report, send 25¢ to Laher Spring and Tire Corp., 2615 Magnolia St., Oakland 7, Cal. Ask for "The 3 Vanishing Killers" by F. J. Laher.

## Recent Government Publications

Here is a list of recent government publications of interest to fleet operators. Unless otherwise noted they can be ordered from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

**Bibliography on Ignition and Spark-Ignition Systems** (Catalog No. C13.4:580) has been compiled by George F. Blackburn and issued by the National Bureau of Standards. Included are over 425 references to books, papers and reports on ignition and ignition systems. Its price is 15c.

**Improving the Truck Delivery Operations of a Wholesale Grocer, A Case Study** (Catalog No. A1.82:127) comes from a study by the Dept. of Agriculture of an independent wholesale grocer in Baltimore, Md. Reported to be the first in a series, its aim is to develop lower cost delivery methods as well as ways to determine the amount of profit in varying size orders. It sells for 35c.

**Survey of Distribution Practices for Prepackaged Frozen Meat** (Marketing Research Report No. 137) debates the question of where frozen meat should be packaged—at the wholesale level or in the retail store. It considers the probable expansion of central-pack meat and the equipment and trucks needed for its distribution. This one is free and can be obtained from Office of Information, U. S. Dept. of Agriculture, Washington 25, D. C.

**Parking Guide for Cities** was prepared by Division of Research, Bureau of Public Roads. It is a 172-page manual covering practically all sides of the parking problem from a "how-to-do-it" angle. Included are many references and descriptions of existing parking facilities. One important chapter deals with action that can be taken by various groups or individuals to promote a solution to city parking. Send 55¢ along with your order.

**United States Army in World War II, The Technical Services: Transportation Corps, Movements, Training and Supply** (Catalog No. D114.7:T68/v.2) covers military transportation—including truck transport. Its 564 pages give a comprehensive view of how military transportation operates, what its special problems are and how it solves them. Its price is \$4.25.

(FOR RECENT MANUFACTURERS' LITERATURE, SEE PAGE 188)

*"I give Leak-Proof rings full credit for completely stopping our oil consumption problems"*

**That's why Pinson Transfer Co. equips its fleet with...**

**CHROME  
CONTROL**

# LEAK-PROOF<sup>®</sup>

## PISTON RINGS

Pinson Transfer Co., Huntington, W. Va., has a good man in Ned Bailiff, Chief Mechanic of its Pikeville, Ky., garage. He knows trucks and how to keep them operating at a profit. He says:

*"Most folks like to know when they're putting out an exceptional product. That's what we think you are doing with your McQuay-Norris heavy duty Chrome Control ring sets.*

*"We have been using your L2596C HD and L926C HD in our Internationals since the first of the year. I give these rings full credit for completely stopping our oil consumption problems for the first time—after trying plenty of competitive ring sets!*

*"Our trucks—we're servicing 27 here at Pikeville, Kentucky—will average around 60,000 miles a year under the most extreme hard service in the mountains of eastern Kentucky.*

*"I told our jobber's salesman I always like to help out my fellow mechanics. That's why I heartily recommend McQuay-Norris rings to all the men along the line who have not tried them. They are tops here. Once tried, they will sell themselves."*



NED BAILIFF  
Pinson Transfer Co., Inc.



# McQUAY-NORRIS

**MANUFACTURING COMPANY ST. LOUIS • TORONTO**

**APPROVED ORIGINAL EQUIPMENT FOR CARS, TRUCKS, BUSES AND TRACTORS**

# PRODUCTS

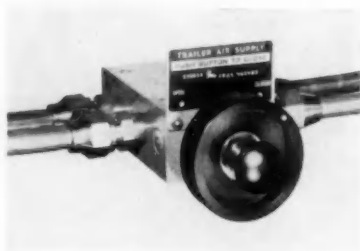
THE LATEST DEVELOPMENTS IN PARTS, ACCESSORIES, TOOLS AND EQUIPMENT FOR THE FLEET FIELD, DESCRIBED IN BRIEF FOR YOUR CONVENIENCE

## P1. Reflector

R. E. Dietz Co., Syracuse, N. Y., is now marketing a moisture-proof, dust-proof reflex reflector with a solid aluminum housing. Listed as the "Number 90," its extremely shallow depth of 7/16 in. and flush mounting reduces possibility of damage to reflector. The 3-in. lucite lens is fade-proof and shatterproof and available in either red or amber. A gasket completely seals the lens against moisture and dust. Reflector is approved in all states.

## P2. Breakaway Valve

Circle Seal Products Co., Inc., Pasadena, Cal., now offers a single unit truck breakaway valve, which meets the truck-tractor provisions of ICC



regulations. Valve is fully ported. This open porting insures no interruption of air flow and assures no delay in brake actuation. The unit is completely within the control of the driver and may be manually controlled. However, in the event of loss of air pressure in the range of 20-45 psi, it will automatically close off. At any time, the driver may manually close the valve by pushing the button on the center of the handle. When manually closing the valve, the driver permits valve to isolate the tractor.

## P3. Highway Reflector

Da-Nite Safety Industries, San Bernardino, Cal., has announced the new "Road-Wag" highway distress signal for trucks, commercial vehicles, autos, farm equipment, construction and utility crews and police or fire departments. Swinging reflector commands attention, gives the same on and off effect at night time as a flashing traffic signal. This signal gives an effective warning both day and night which exceeds I.C.C. requirements.

## P4. Tarp Repair Kit

Louve Ray Corp., Boston, Mass., is now marketing a repair kit for neoprene-coated nylon tarpaulins. This kit contains over 500 sq in. of neoprene-coated nylon, together with enough special cement, abrasive, roller, talc, and instructions to make numerous repairs.

## P5. Warning Lights

K-D Lamp Co., Cincinnati, Ohio, is now presenting to the trade multi-purpose KD-766 and KD-766ST turn signal, stop and rear light or combination of all three. Both lights are scientifically designed for truck, trailer and bus turn signal service. The 4-in. lucite lens is recessed 5/16 in. for protection and held in place by removable galvanized snap ring. These lights mount flush, are made vibration-proof with felt pad which is furnished, and are moisture-proofed and dust-proofed by rubber lens gasket and rubber socket insert. The one-piece steel body is protected.

## P6. Brake Signal

Brake Safe Corp., Providence, R. I., produces a warning device that instantly warns the driver of an automobile or truck when the brake fluid is below the safe level. A red light on the dash illuminates should the fluid fall for any reason while the car or truck is being operated. This device is applicable to straight, hydraulic, vacuum over hydraulic, or air over hydraulic brake systems. It can be used in any vehicle that has a reservoir master cylinder for brake fluid.

## P7. Reefer Unit

Hunter Mfg. Co., Solon, Ohio, announces a new hydraulic-drive cargo cooler. The cargo cooler weighs 360 lb and has a cooling capacity of 14,200 Btu per hour at 20° F evaporator and 90° F ambient temperature. It is designed to meet protective refrigeration requirements in the medium temperature range—between 35° and 50° F in truck bodies up to approximately 14 ft in length, for either long or short haul operation. Power from the truck engine is transmitted to the cargo cooler through a hydraulic



pump which drives the refrigeration system at constant speed regardless of vehicle speed. A fully automatic thermostat starts and stops the unit.

### P8. Flaring Tool

E. Edelman & Co., Chicago, announces a new flaring tool for steel tubing. This device forms single or double flares on every size and type of tubing with only one adapter and cone which instantly interchange to do all of the work. Mechanics can use the double flare adapter to quickly form 3/16, 1/4, 3/8 and 1/2-in. tubing by (1) turning the vise jaws to the indicated sizes, (2) turning spinner for first fold, and (3) replacing adapter with flaring cone.

### P9. Leak Locator

Ken-Tool Mfg. Co., Akron, Ohio, introduces a solution for locating tire and rim air leaks. This new "Detecto-Mist" was developed for use with spray-units and is an easy to prepare solution that locates the tiniest leaks on passenger car, truck, tractor, implement, aircraft and off-the-road tires, as well as on rims, valve stems and conventional tubes. The mist is sprayed on the tire assemblies, escaping air causes bubbles to form instantly.

### P10. Drive Ratchet

P & C Tool Co., Portland, Ore., is marketing a new 3/4-in. drive ratchet. Less than 5 in. long, the new tool is designed for use in a small working area.

### P11. Vehicle Washer

Lawrence Liekweg Co., St. Louis, Mo., is now manufacturing custom designed drive-through truck washer. On a test run two men using this equipment washed 51 trucks in 45



minutes. The manufacturer states that this set-up can be readily modified to meet the needs of most local delivery fleets using van-type bodies.

### P12. Heater-Defroster

Evans Products Co., Plymouth, Mich., is now marketing the heavy-duty heater-defroster unit built especially for truck use. Special features include a powerful 17,325 Btu output, heavy duty core and header tanks tested to withstand 50 lb of pressure, threaded core outlet tubes into cast header tanks, heavy-duty bus-type motor used in conjunction with a high velocity "Evanair" fan, easy accessibility for servicing, fresh air adapter kits to fit most trucks.



### P13. Wrench Chain

Morse Chain Co., Ithaca, N. Y., has added a wrench chain to its growing line of products. The chain is primarily for chain wrenches and vises but may also be used on any application where strength in tension, flexibility and quick, easy changes in chain wrap are necessary. Extended pins on both sides, each pitch, provide this quick, positive locking action. The natural flexibility of the chain permits it to hold any shaped material firmly.

### P14. Gapping Tool

Clark-Feather Mfg. Co., Fort Morgan, Colo., announces a new larger model spark plug gapping tool. It is designed for the new longer reach plugs as well as regular 18 mm spark plugs. The tool supplements and does not replace the original CF-70 gapping tool which should be used for plugs from 10 to 18 mm up to 1/2-in. reach (threaded portion). This model has a larger yoke and throat to handle the new and larger plugs without touching the porcelain and without throwing the central alignment off.

### P15. Paint Remover

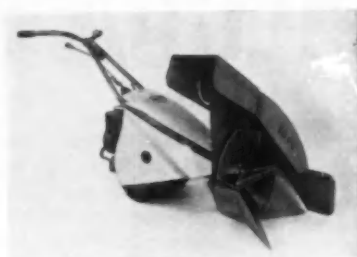
The RPO Chemical Corp., Hazel Park, Mich., announces a new paint remover, called LPO—Lifts Paint Off. It is claimed it will blister open and epoxy paints off surfaces, often in less than 5 minutes. This action is said to take place without damage to the underlying wood or metal surfaces.

### P16. Air Conditioner

Frigikar Corp., Dallas, Tex., announces new automotive air conditioning equipment. Frigiking 57-UD features include new pushbutton touch control. Refrigerated air may be directed to any area in the car, or directly on any individual passenger, or it can be easily set for no-draft cooling. Conveniently located side vents direct cool air on front seat passengers' and driver's feet to neutralize engine heat. The unit motor is permanently sealed.

### P17. Snow Remover

Jari Products, Inc., Minneapolis, Minn., announces a new multi-purpose machine designed to take the strain out of snow shoveling. This



power unit with snow thrower attachment, entirely self-propelled and capable of handling up to 300 shovelfuls per minute, is said to cut a path 16 in. wide through drifts up to 18 in. deep and go through deeper drifts with little difficulty. By throwing the snow in one direction, rather than blowing it or pushing it aside, the unit is impossible to stall, and open construction prevents clogging. Raker bar cuts up heavily packed or deeply piled snow.

(TURN TO PAGE 56, PLEASE)



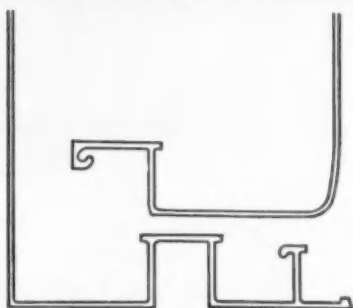
## FOR REEFERS



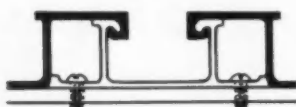
A unique interlocking assembly system positively assures waterproof joints. Box sections, full width from bottom to top, permit maximum air circulation. Alcoa design incorporates flashing and side sections in a one-piece, leakproof gutter. And optional assembly methods, with or without a center key, allow installation to start at the center or either side, as well as saving labor on replacement in event of damage.

# Available now!

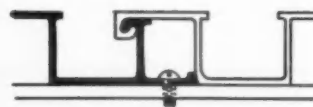
## ALCOA ALUMINUM TRUCK



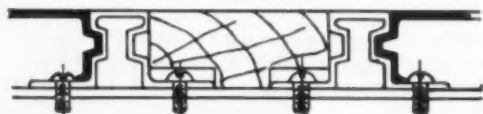
Reeper Gutter Sections



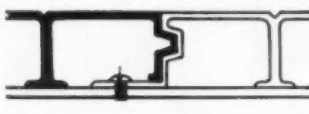
Reeper Assembly with Center Key



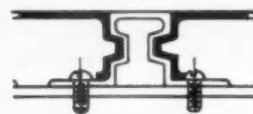
Reeper Assembly without Key



Center Nailing Strip



Dry Cargo Assembly without Key



Dry Cargo Assembly with Center Key





## FOR DRY FREIGHT



Like reefer flooring, the system for dry cargo flooring makes a center key optional. Besides permitting installation to be started at the center or sides, it provides for the addition of a third nailing strip in the center to keep loads from shifting and maintain proper weight distribution. The interlocking system for assembly provides a continuous load-bearing surface.

# TWO GREAT NEW FLOORING SYSTEMS

From the Alcoa® Development Division that helped put the first aluminum trailers on the road more than 25 years ago come two new flooring systems—one for refrigerated freight and one for dry cargo. Their significant advances in design reflect Alcoa's long history of contribution toward more profitable trucking.

They're light... a complete installation in a 32-foot reefer with 90-inch floor weighs only 756 pounds. That means more paying freight, trip after trip. They're rugged, because they're

extruded from tough, corrosion-resistant aluminum alloys and they're designed to withstand hard service. All fasteners are concealed; no recesses to trap dirt or moisture and no projecting screwheads to snag cartons.

**And they're available now** for any floor width from Alcoa Aluminum Distributors serving all America. Your source of supply is as near as your telephone. Aluminum Company of America, 1876-A Alcoa Building, Pittsburgh 19, Pennsylvania.



THE ALCOA HOUR—Television's finest live drama, alternate Sunday evenings



Your Guide to the Best in Aluminum Value

# NEW

## PRODUCTS

THE LATEST DEVELOPMENTS IN PARTS, ACCESSORIES, TOOLS AND EQUIPMENT FOR THE FLEET FIELD, DESCRIBED IN BRIEF FOR YOUR CONVENIENCE

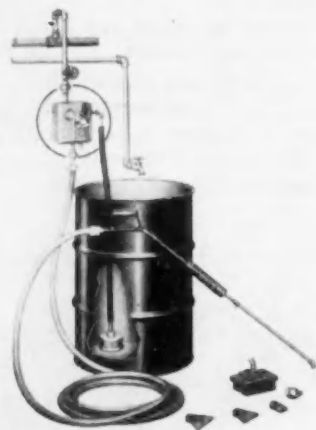
Continued from Page 53

### P18. Snow Bucket

Schwartz Mfg. Co., Lester Prairie, Minn., is introducing this season a snow bucket attachment that easily slips on most makes of fork lift trucks. This all-steel snow bucket is designed to work in hard-to-reach spots not ordinarily cleared with snow plows. With the snow bucket the operator can pile snow where desired, lift over fences or obstructions, load into trucks. Wet, hard packed snow is easily handled with this extra large capacity bucket. A heavy grader blade edge gives it increased efficiency for cutting through ice.

### P19. Steam Cleaner

Clayton Mfg. Co., El Monte, Cal., announces a steam cleaning unit weighing 15 lb. This new Model No. S-809 offers single valve control of hot cleaning solution plus a visual gage constantly showing steam pressures. This 8½ x 7-in. control cabinet can be readily connected to any ¾-in. valve steam outlet. This steam line with pressure of 40 lb or more supplies the only power required.



### P20. Soldering Iron

Linde Air Products Co., New York City, announces a new Model No. 406 medium soldering iron, an air-acetylene unit designed to handle all but the heaviest soldering jobs in sheet metal, electrical, plumbing and maintenance shops. Pointed or chisel-type heads are available.

### P21. Pressure Cleaner

Homestead Valve Mfg. Co., Coraopolis, Pa., is marketing the Series "4000 Hypressure Jenny." The operator simply sets valves on the con-



trol panel and can get any desired cleaning action ranging from 400 gph of clear, cold water at 450 lb pressure, up to a mixture of steam, water and cleaning compound at 325° F. Many combinations of heat, pressure, and water volume, with or without cleaning compound, enable the unit to do such diversified jobs as blasting heavy mud or clay deposits from trucks, road-building or construction machinery; removing grease and dirt from equipment, machinery, parts, floors, etc; cleaning for repainting; or doing a thorough job of sanitizing or deodorizing. Series "4000" is available in portable or stationary models with either electric motor or gasoline engine driven pumps, and a choice of oil or gas for fuel.



### P22. Steam Cleaner

Vapor Heating Corp., Chicago, Ill., has developed a new low-operating cost vapor steam cleaner, Model No. 45, which will produce a steady jet of steam at 120 lb pressure. Cleaner consumes only 1¼ gal of No. 1 fuel-oil per hour to turn 45 gal of water per hour into an effective steam cleaning jet. The venturi-type, solution-lifting, steam cleaning gun will mix a concentrated alkaline cleaning solution with the steam, which will help the steam cut right through packed on greasy dirt faster. Then the concentrated cleaning solution may be turned off and the equipment being cleaned may be rinsed with clean steam.

### P23. Tarp Material

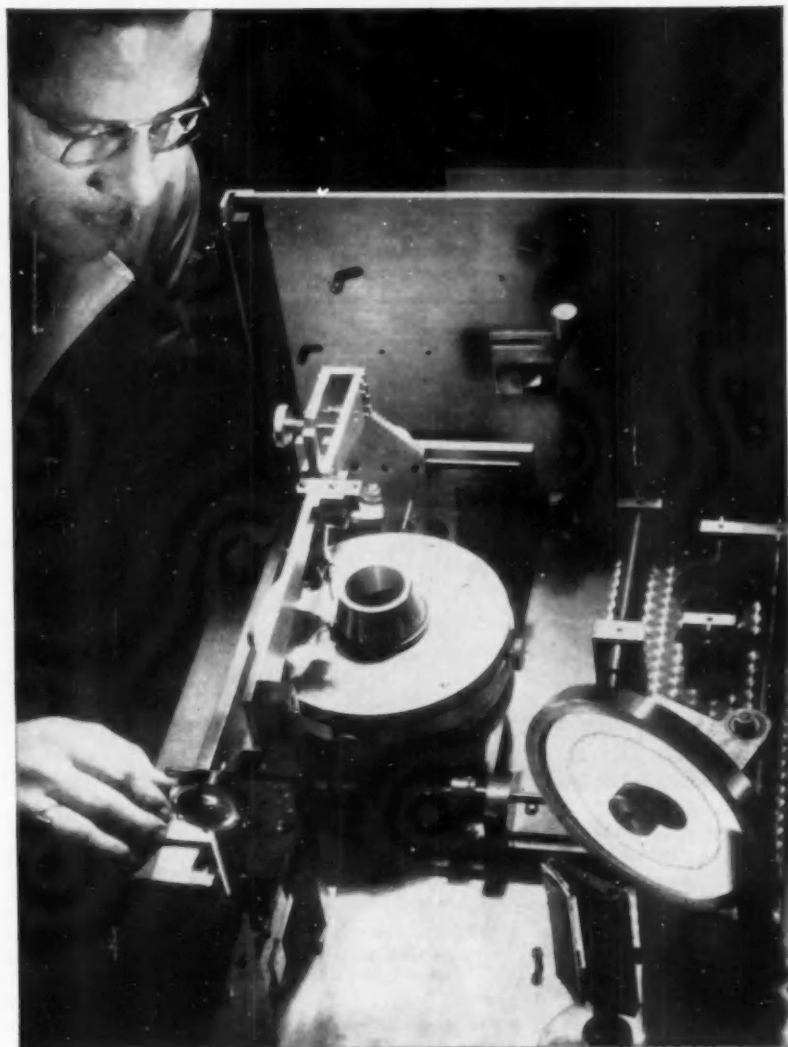
E. I. Du Pont de Nemours & Co. Fabrics Division, Wilmington, Del., announces a new, improved "Fairprene" tarpaulin material providing improved abrasion resistance in combination with lightness by virtue of a coating of "Hypalon" synthetic rubber on the underside. Exterior surface is coated with a black neoprene. Water absorption is virtually zero. Rot and mildew-resistant, tarps of this type can be stored wet without damage. They remain pliable in sub-freezing temperatures. Weight is 14 oz per sq yd and is available in 42, 54 and 72 in. widths. The manufacturer supplies the coated fabric only and not the finished tarpaulin.

### P24. Soldering Aid

Waller Electric Corp., Easton, Pa., is now marketing a pencil-shaped, colored plastic holder fitted with one pointed metal probing end and a slotted wiring end. It can be used to hold work being raised to soldering heat, to twist wires into tight connections prior to soldering, to untwist wires that are to be resoldered, to hold surrounding sensitive components clear of points being soldered.

(TURN TO PAGE 60, PLEASE)

# We measure curves to a millionth of an inch



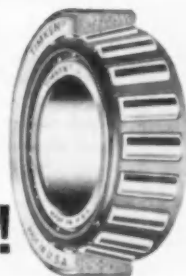
*(Another reason why  
TIMKEN® bearings are first choice  
with truck manufacturers)*

**Y**OU'RE looking at a profilograph—a machine we helped develop that checks and records contours and smoothness of circular surfaces within a millionth of an inch. It helped us develop the grinding techniques and machines that give Timken® tapered roller bearings their truer, smoother microscopic surface finish. Result: Timken bearings give quieter, longer-wearing performance in your vehicles' moving parts—the vital zone.






Only Timken bearings give you all these advantages: 1) made of our own tough, fine alloy steel—we're America's only bearing manufacturer that makes its own steel; 2) advanced design, for true rolling motion; 3) rigidly controlled quality; 4) precision manufacture. That's why Timken bearings are first choice with men who know trucks best—truck manufacturers.

Take a good idea from them. When you buy replacement bearings, make sure they're stamped with the trade-mark "Timken". And for helpful service information, send for free booklet, "Timken Tapered Roller Bearings, Their Care and Maintenance". Write Dept. JCC-1, The Timken Roller Bearing Company, Canton 6, O. Canadian plant: St. Thomas, Ontario. Cable: "TIMROSCO".

## SINCE THEY'RE BEST WHEN THE TRUCK IS NEW, THEY'RE BEST FOR REPLACEMENT, TOO!



**TIMKEN**  
TRADE-MARK REG. U. S. PAT. OFF.  
**TAPERED ROLLER BEARINGS**

NOT JUST A BALL  NOT JUST A ROLLER  THE TIMKEN TAPERED ROLLER  
BEARING TAKES RADIAL  AND THRUST  LOADS OR ANY COMBINATION 

# Performance Records Prove Eaton Free-Valves DO Last Longer!



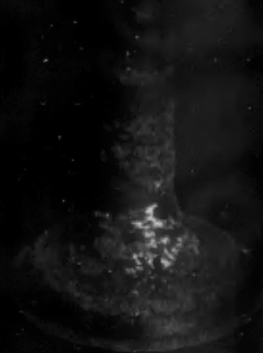
## CONVENTIONAL VALVES

Failure unpredictable—anywhere between 5,000 and 40,000 miles. Impossible to set up dependable preventative maintenance schedule.



## EATON FREE-VALVES

Still in good condition after 100,000 or more miles, permitting preventative maintenance scheduling. No in-between servicing necessary.



The Eaton Free-Valve is free of any restraining force set up by the valve spring. The normal creeping tendency of the valve causes it to take infinitely variable positions with respect to the seat at successive lift cycles.

The common goal of valve and engine manufacturers—and truck operators—is to obtain valve life equal to that of other major components, thereby eliminating the necessity for valve servicing between major overhauls. Performance records covering millions of miles of heavy-duty operation prove that Eaton Free-Valves have achieved this goal.

Eaton Free-Valves are genuinely "free"—free to turn at random in either direction, during a major portion of the lift-cycle. This free-floating action wipes stem and seat free of deposits; keeps a film of oil on stem and guide surfaces. Scuffing is prevented, wear is reduced. Hot-spots due to local leakage are eliminated. Longer valve life is a natural result.

Our engineers will be glad to explain how Eaton Free-Valves can be applied to engines of all types and sizes.

# EATON

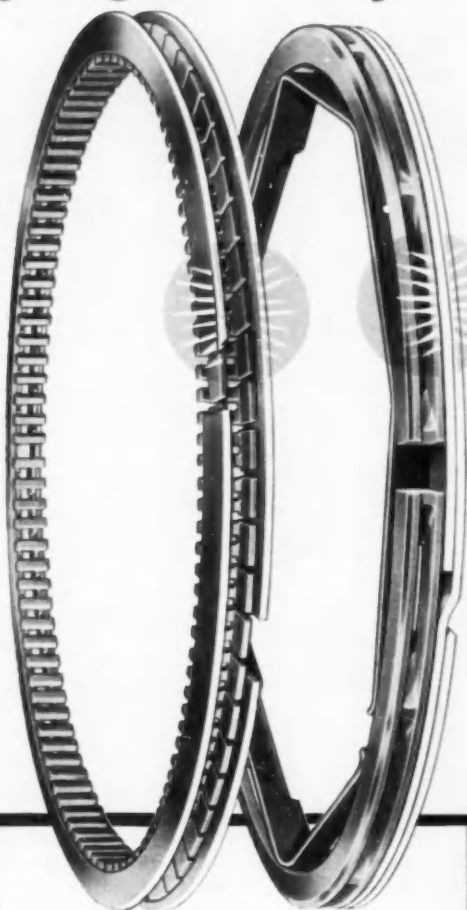
— VALVE DIVISION —  
MANUFACTURING COMPANY

9771 FRENCH ROAD • DETROIT 13, MICHIGAN



**PRODUCTS:** Sodium Cooled, Poppet, and Free Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Rotor Pumps • Motor Truck Axles • Permanent Mold Gray Iron Castings • Heater Defroster Units • Snap Rings • Springtites • Spring Washers • Cold Drawn Steel • Stampings • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

# Whatever is Finest for the Engine you get in every RAMCO Engineered 10-Up Set



**Ramco chrome C-9 oil ring** (left above) Years-ahead Circumferential Expansion achieved through a new Duomatic Expander design provides a new high in conformability and side sealing action.

**Ramco chrome Spiro-Seal oil ring** (right above) has had the Circumferential Expansion action of the Spiro-Segment for over 18 years. With its exclusive Double-Life Principle, Spiro-Seal is the most advanced design oil ring available for most of today's re-ring requirements.

**Ramco years-ahead compression rings...** Into each Ramco 10-Up engineered set goes just the right combination of compression rings, each embodying advanced Ramco engineering such as the RAMCO TOP CHROME COMPRESSION, with its equal pressure action; the RAMCO CHROME RAIL COMPRESSION, which double seals with chrome and cast-iron; and the RAMCO TAPERED FACE COMPRESSION, with its hairline bearing surface for immediate seating.

Not just one exclusive, years-ahead oil ring... but two! That is Ramco Engineering's answer for you who want the finest re-powering results. Chrome C-9 or Chrome Spiro-Seal, whichever is finest for the engine, is the oil ring you get when you call for Ramco engineered 10-Up sets. In each set, too, are advanced Ramco exclusive designed Compression rings, providing a selected combination of top chrome, chrome rail or cast-iron types to provide the finest ring performance required by the specific engine. That is why when you depend on Ramco Engineered 10-Up Sets, you are assured of everything required for Finest Get Up and GO! Ramsey Corporation, St. Louis 8, Missouri.

**FINEST**

Immediate Seat-In without engine drag

**FINEST**

Immediate Oil Control without wall wearing pressure

**FINEST**

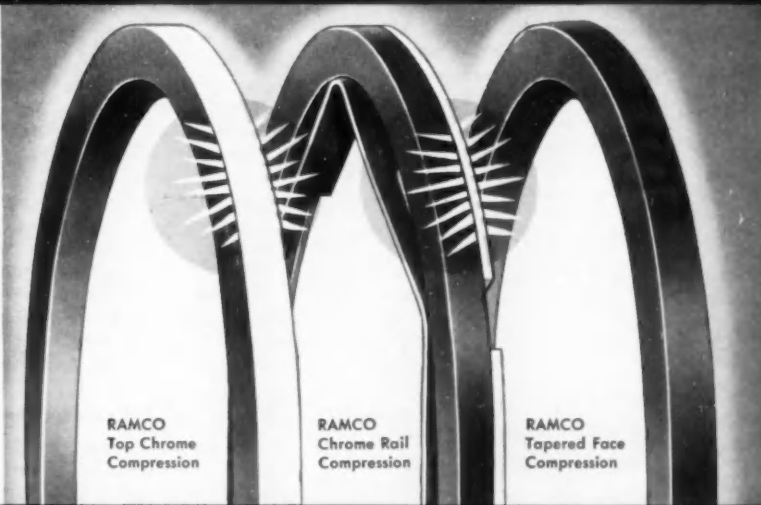
Complete High Vacuum Oil Control by top and bottom oil ring sealing

**FINEST**

Continuing Compensation for Wear that keeps engines running like new longer

**FINEST**

Longer Service Life because of Ramco's years-ahead precision engineering



# RAMCO 10<sup>up</sup> piston ring sets

for **FINEST** Get UP and **GO!**



# NEW

## PRODUCTS

THE LATEST DEVELOPMENTS IN PARTS, ACCESSORIES, TOOLS AND EQUIPMENT FOR THE FLEET FIELD, DESCRIBED IN BRIEF FOR YOUR CONVENIENCE

Continued from Page 56

### P25. Power Steering

Air-O-Matic Power Steer Corp., Cleveland, Ohio, announces a completely new low cost power steering system. The system operates entirely on compressed air. The system consists of a torque valve installed on the drag link, an air-actuated power cylinder mounted on the tie rod, working against a fixed bracket attached to the front axle. Air capacity provided on existing vehicles is adequate.

### P26. Tire Changer

Tire Machinery Corp. of America, Littleton, Colo., recently announced this pneumatic-powered tire changing device. It is designed to break both beads instantly and simultaneously on any tire size from 12 in. through a 9x22.5 tubeless truck tire. No special adapters or tools are needed to handle the new 14-in. tubeless tire. In actual tests, a 15-in. tubeless tire was removed in 20 sec., including breaking the beads with 30 lb of air pressure in the tire. Wheel table is designed to either lock completely or remove in one direction for easy handling.



### P27. Bead Breaker

Bishman Mfg. Co., Osseo, Minn., announces a new tubeless tire bead breaker for use from 17x5 through 24x5 in. tires. According to the manufacturer, this bead-breaker can be used on all tubeless tire rims and wheels, steel or aluminum. Wheel size is set by a simple pin adjust-



ment. The tool is then laid across the rim or wheel and the handle raised to engage and lock the rim jaws. Pushing down on the handle next forces the bead-breaker shoe down to break the bead. It is claimed that the leverage of the handle develops enough force to break the tightest bead to eliminate pounding and danger of damaging tire or rim. It can be used with the wheel on the floor or on a tire changing machine.

### P28. Rust Preventive

McAleer Products Div., Inc., Detroit, now announces a twin product called "PRO and CON." This product serves a dual purpose. "Con" removes rust and corrosion on metals. "Pro" is then applied to prevent recurrence of rust and corrosion. "Pro" is colorless. It will not peel or chip and is not a lacquer. It protects to six months.



### P29. Tire Spreader

Branick Mfg. Co., Inc., Fargo, N. D., announces a new heavy-duty tire spreader to spread heavy ply and wire cord tires. This makes it easy for installing and removing inside curing rims, air bags, tubes and flaps, also for inspection and repair. It revolves heavy tires while spread for fast visual inspection inside and outside of tire. Spreader hooks are designed to provide easy access to tire without being in the way of work or vision.

### P30. License Light

Auto Lamp Mfg. Co., Chicago, announces a new lamp known as the Model No. 151. This license light is available with or without heavy license mounting bracket and has a clear lens which throws a bright spot on the license numerals. Another version is the Model No. 152 combination license and tail light where a single bulb shines through twin lenses, a red deflector tail light and a clear lens for the license plate. Both models are available for either 6 or 12-volt systems.

### P31. Noise Pick-Up

Allen B. Du Mont Laboratories, Inc., Clifton, N. J., announces a new accessory for the "Du Mont EnginScope." "Ping" and other abnormal automotive engine noises can be tracked down to the source by the latest accessory. The Type No. 2901 noise and vibration pick-up allows the auto mechanic to locate loose and malfunctioning engine parts simply by viewing the light pattern displayed on the "EnginScope" picture screen. Detonation (sometimes called "ping") can be isolated to the individual cylinder in which it occurs by use of the Type No. 2901 pick-up.

(TURN TO PAGE 196, PLEASE)

Sundstrand drive eliminates auxiliary engines

## Assures Refrigeration at all truck speeds!



Reservoir and hydraulic motor of Sundstrand Constant Speed Refrigeration Drive are mounted over the cab in refrigeration unit itself. Pump is mounted under the hood using Sundstrand mounting kit.

Designed—not adapted—for the job of truck refrigeration, the Sundstrand Constant Speed Drive is quiet, compact, needs little or no maintenance and consumes no fuel. Full rated power is transmitted on a continuous-duty basis. Starting and other ordinary overloads are readily sustained for short periods.

Here are a few features of Sundstrand Constant Speed Refrigeration Drives:

**Automatic Temperature Control**—Solenoid valve built into pump connects to truck thermostat. Shuts system down or starts it up as needed.

**Smooth Compressor Starting**—Built-in delay eliminates the jerking normally resulting from compressor load.

**High Efficiency**—Compact system doesn't require a heat exchanger or bypassing oil. Small reservoir contains filter and 1½ quarts of oil.

**Simple Standby Operation**—No declutching is required. The refrigeration unit is merely plugged into an electrical power source.

**Mounting Kits**—Sundstrand mounting kits are designed to fit a particular model of truck. All parts—brackets, pulleys, belts, etc.—needed for complete installation are part of the mounting kit.

Get more details about the three available sizes of Sundstrand Refrigeration Constant Speed Drives by writing today for Bulletin 5002-4.



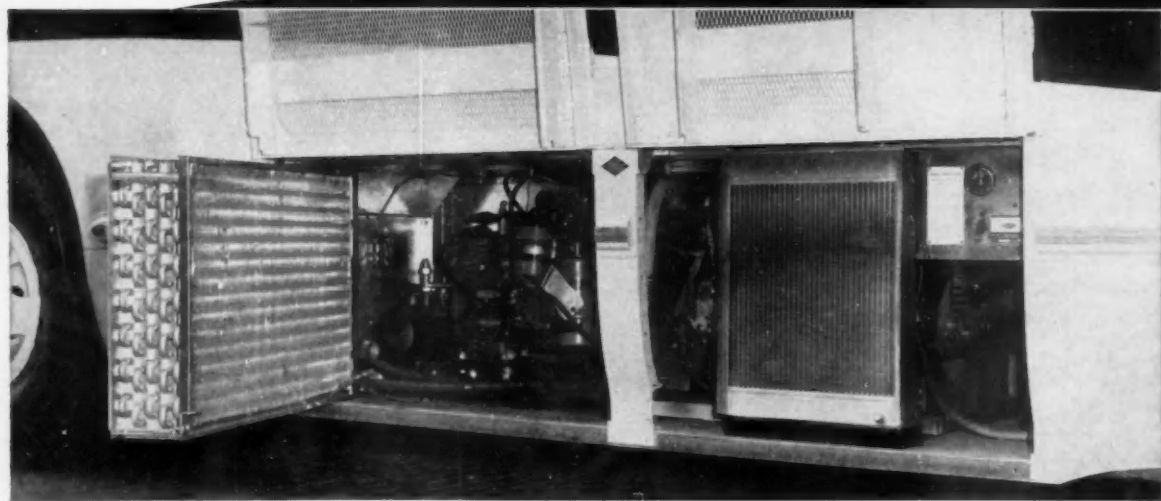
### SUNDSTRAND HYDRAULIC DIVISION

SUNDSTRAND MACHINE TOOL CO., ROCKFORD, ILLINOIS, U. S. A.

Eastern Sales Office: 89 Summit Ave., Summit, N. J.

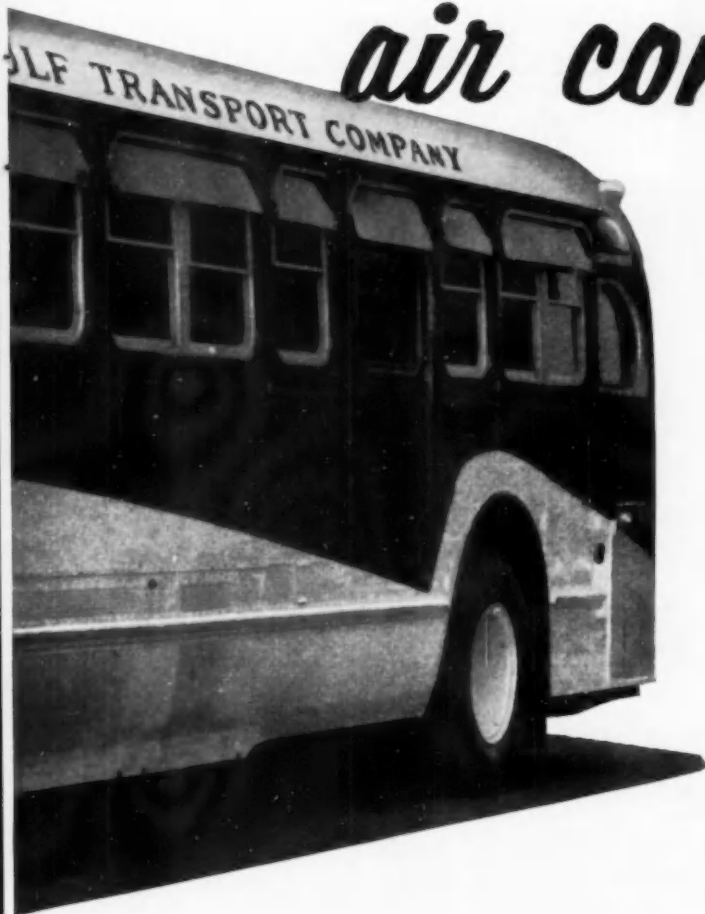
AIRCRAFT AND INDUSTRIAL HYDRAULIC TRANSMISSIONS, PUMPS, MOTORS, AND VALVES  
OIL BURNER PUMPS • AIR SANDERS • LATHES, MILLING, BROACHING AND SPECIAL  
MACHINES • BROACHING TOOLS • MAGNETIC CHUCKS

# The



Typical compact Tropic-Aire—Carrier airconditioning installation in transit coach . . . courtesy Gulf Transportation Co., St. Louis.

# story behind transit air conditioning



Transit coach air conditioning has been big news in the transport industry this year. Because this year, working with coach designers and modification specialists, Tropic-Aire engineers met and solved a great many of the problems inherent in transit coach heating and cooling.

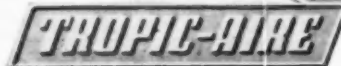
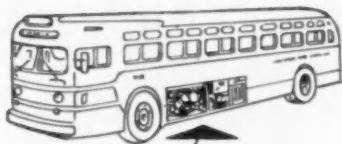
In cities across the nation, Tropic-Aire—Carrier equipment was installed in time for summer street-testing. Resultant conclusion: transit air conditioning is effective . . . it *works*. In one city, riders deliberately missed regular coaches to catch the boldly painted air conditioned bus. In another city, thousands of riders put their comments on post-cards. They said, in effect, "This is it!"

Next spring, other great cities will put Tropic-Aire—Carrier air conditioned busses on their streets.

Effective transit air conditioning involves a multitude of factors. Most essential is a heavy-duty air conditioning unit built to stand up under all kinds of conditions with a minimum of maintenance. Installation know-how is of vast importance. Proper air distribution determines the difference between outstanding performance and mediocre functioning.

If you are thinking of air conditioning your transit fleet presently, or should it become a possibility for the future, we will consider it a privilege, through a complete engineering analysis, to offer you the benefit of our broad experience in the transit air conditioning field.

**McGRAW ELECTRIC COMPANY**  
5201 West 65th Street  
Chicago 38, Illinois



MOBILE AIR CONDITIONING EQUIPMENT

## ROADWAY EXPRESS STATES:



Vice President Emerson W. Swan and Maintenance Director W. E. Larkin, (right) examine one of Roadway's newest trailers equipped with General Air Springs.



## "GENERAL AIR SPRINGS

**allow us to build more  
cube capacity into our trailers"**

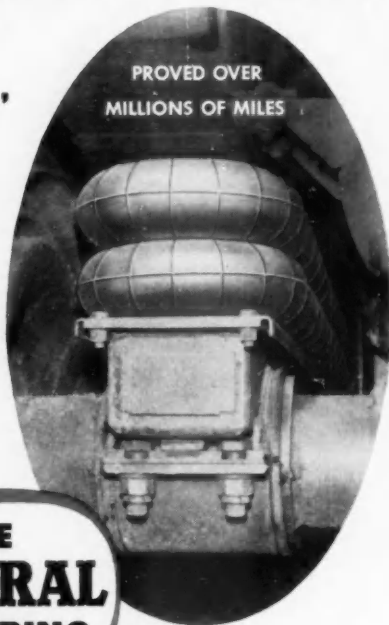
Lower maintenance costs, higher profit payloads and greater cargo protection are three big reasons why Roadway Express of Akron is specifying General Air Springs on all new equipment.

"Our standardizing on General Air Springs," says Mr. Larkin, "is part of our constant effort to provide customers with the most modern, best performing equipment on the highways."

Discover today for yourself how General Air Springs can help cut costs, build profits all along the line!

**Like Roadway Express . . .  
Specify General Air Springs  
for Greater Payload... Greater Safety!**

**THE  
GENERAL  
AIR SPRING**



**THE GENERAL TIRE & RUBBER COMPANY • AIR SPRING DIVISION • Akron, Ohio**



# "Stainless Steel trailers have licked our corrosion problem"

## A case study of Ellis Trucking Company, Indianapolis, Ind.

In 1919, Fay Ellis converted an old Cadillac into a truck and started hauling things around Indianapolis. Today, his Ellis Trucking Company owns 250 tractors and 425 trailers, and it's growing bigger all the time.

According to General Manager Claude Caylor, "We use Stainless Steel trailers because they don't rust, don't have to be painted and don't wear out

like the ordinary trailer. They give much longer working life.

"We figure we save about \$300 annually on each Stainless trailer. This estimate is based on the money we *don't* spend for a yearly paint job, re-lettering and removing rust spots. Also, we earn extra revenue, because these trailers spend their time *on the road* . . . not in the shop."



Mr. Ellis (standing) has a talk with his General Manager, Claude Caylor.

Recently, Ellis started buying Fruehauf's new Stainless Steel Volume Van. Here, in addition to the lower maintenance, they average increased earnings per mile of 15% to 20% because they can haul a greater volume of lightweight cargo.

When you are trying to compare the cost of Stainless Steel with other types of construction, remember this one overpowering fact: Of the thousands of Stainless Steel trailers in use, *not one has ever been known to wear out.*

Two Ellis rigs ready to roll. Both trailers are Stainless; the one at the left is new Fruehauf Volume Van.



UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO  
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • NATIONAL TUBE DIVISION, PITTSBURGH • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS  
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

# USS STAINLESS STEEL



SHEETS • STRIP • PLATES • BARS • BILLETS • PIPE • TUBES • WIRE • SPECIAL SECTIONS

UNITED STATES STEEL

# Now, City Operators Look into Air Conditioned Buses

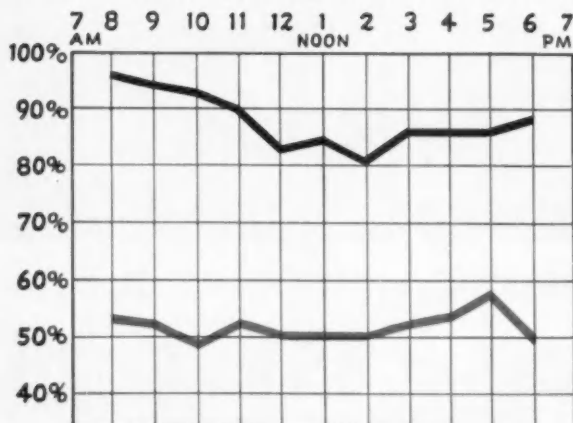


Here is how four systems operate and how they are put together, plus experience and experiment reports from seven transit fleets

**AIR CONDITIONING** may well be next step in city bus operations. For most properties it is still strictly in the experimental stage, and—as Jim Moreland of Fifth Avenue Coach Lines puts it—it is a three-phase experiment. The idea is to:

1. Find out if it is physically possible to air condition a transit bus in heavy city operation.
2. Determine whether the equipment will operate without repeated failures.
3. Decide whether it is economically feasible.

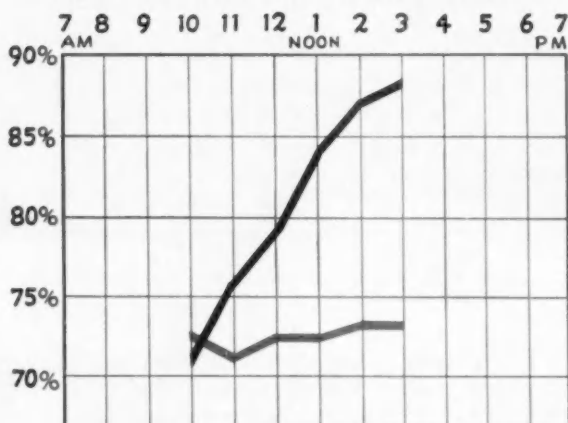
**STUDIES** by Fifth Avenue Coach show what air conditioning does to make a bus comfortable. In this sample, maximum relative humidity outside the coach reached 97 per cent (black line), inside (red line) it was 55 per cent



Most operators are still involved with the first phase. There are a few notable exceptions. One is San Antonio Transit where 50 air conditioned units have been quietly chugging along since 1947. Another is Gulf Transport which has a number of air conditioned coaches including 5 on a suburban run near St. Louis. Then, since we started working on this project, comes word from St. Louis Public Service that 100 conversion units have been ordered.

We have more details and comments from these

**IN A 10-day temperature study**, the highest peak was 88 deg (black line). It was reached on the day this chart was computed. Note temperature inside bus (red line) was held to 75 deg, despite frequent stops and heavy traffic



**TROPIC-AIRE-CARRIER** equipment is shown in these photos as installed on existing equipment of Gulf Transport Co. Similar equipment is used on all jobs air conditioned by Mack. Cool air comes up the vertical duct at third right seat (top photo). Baffles in roof distribute the air uniformly throughout entire perforated roof and there is one duct to outlet near front door. The return duct is located under fourth seat, goes directly to air conditioner

**MECHANICAL** equipment includes 4-cy, 28-hp gasoline engine and 5-ton compressor. The entire unit weighs approximately 1100 lb, is mounted under the floor and supported by reinforced cross members. Drop doors have been added on left side (center photo) to provide access to engine, compressor and condenser—the latter being hinged. Existing spare tire door on right (bottom photo) gives access to evaporator and fan mounted directly below vertical duct. Circulating fan provides approximately 1600 cfm. Since this is almost identical with bus capacity, air changes once a minute

and other users shortly. But first a word about the basic equipment.

### Basic Equipment

From available data there are only four basic types of air conditioning equipment now being used in city service. They are described in pictures and captions on these two and the following three pages. They include:

1. The Tropic-Aire-Carrier system used by San Antonio Transit, Gulf Transport and all the experimental units developed by Mack. These are now in operation at Niagara Frontier in Buffalo, New York Transit Authority in Brooklyn and the new Mack "Dream" bus. Units are mounted under the floor, include ducting to the ceiling and can be installed in either new or old vehicles.
2. The Thermo-King unit exclusively, at the moment, by St. Louis Public Service. It is designed for external mounting on the roof and can be quickly added to existing equipment.
3. The General Motors factory installed system using basic Trane Co. components. This is the only unit in transit service which uses the vehicle's (TURN TO NEXT PAGE, PLEASE)





**THERMO-KING** system—used by St. Louis Public Service—is adoption of basic truck refrigeration unit. It is rated at 7 tons. Cool air duct (with 1-in. fiber glass insulation) runs along outside of roof, connects with four diffusers in ceiling. There is also an "Ultralite" spray on inside of duct, wheel housings and side walls. "Solex" heat-resistant glass is used

**SELF-CONTAINED** unit weighs approximately 725 lb, mounts on top rear of bus. It is powered by Onan 2-cyl air-cooled engine rated at about 13 hp. "Hot side" is at rear, "cold side" in front. Fan moves 1900 cfm. Absences of interior ducting, refrigerant lines and remote units, cuts down on installation cost. Entire unit may be replaced quickly for overhaul

## ... Air Conditioned Buses



Continued from Page 67

engine as its source of power. To the best of our knowledge there are only two of these, one in the permanent possession of Fifth Avenue

- Coach Lines and the other on roving assignment.
- The Frigikar system, developed in conjunction with Dallas Transit, uses a 10-kw electric generating plant mounted under the floor and five electric-powered 1-hp compressor units mounted above the roof.

### What Do Users Say?

With this summary of basic equipment, the next step is to find out what the actual users think of their units. Some have had a great deal more experience than others. A few have made quite careful studies, others must wait for another warm season.

But results to date are encouraging. Here's the city by city round-up.

### Fifth Avenue Coach Lines

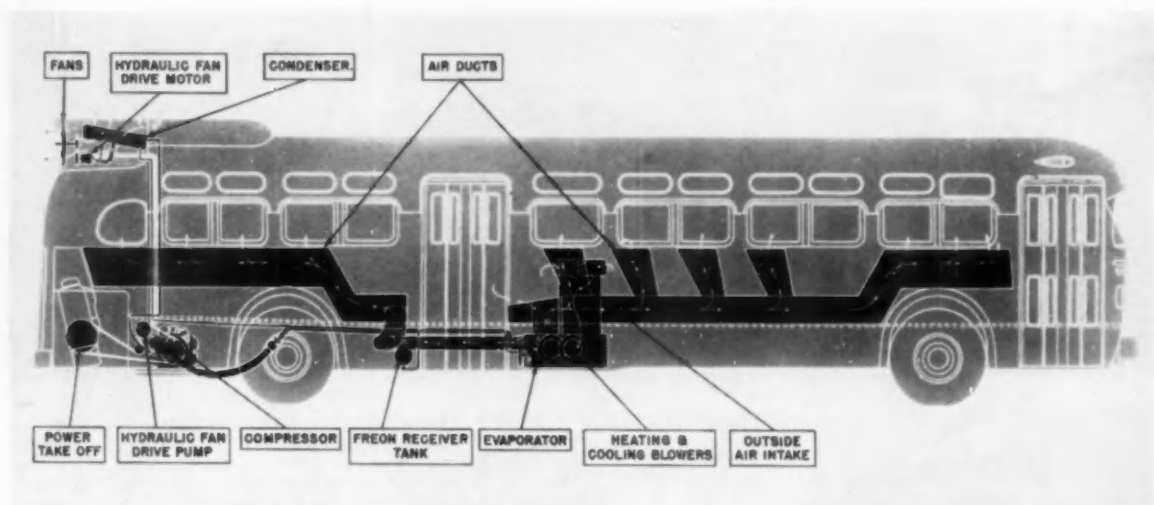
Fifth Avenue Coach Lines has undoubtedly made the most scientific study to date on the specific results of air conditioning. Their General Motors Model No. TDH-5106, factory-equipped with Trane Co. air conditioning arrived on August 27. Although it was late in the season, they were able to get at least two weeks of experience in quite warm weather.

Chief Engineer, James Moreland, states that the goal was to achieve a constant temperature range between 70 and 75 deg and a constant humidity range between 40 and 60 per cent. The test demonstrated that this was possible despite outside temperatures that ran as high as 88 deg and humidity as high as 97 per cent.

Even more remarkable is the fact that this performance was obtained despite the fact that during one day the bus stood at a stand-still, engine idling, while more than 1500 people filed through it. Similar performance was noted throughout each of the days that the bus was on regular runs in the city of New York.

During the course of the test runs, "Take One" cards were distributed to passengers. They included a self-addressed return card and a surprising number came back. Approximately 97 per cent of the people answering said they liked the experiment and believed that air conditioning was worthwhile. About 78 per cent answered "Yes" to the question "Does it add to your riding comfort?" and only 1 per cent said "No". There were not too many answers to the all important question: "Would you ride more often on buses like this in the summer?" But of the total, 29.3 per cent





TRANE components, factory installed by General Motors, are used by New York Omnibus. It is the only transit installation, reported here, which uses the main engine for power. The 8-cyl, 10-ton compressor draws about 25 hp. Location of major components is shown above

COOL AIR ducts are located underneath windows, occupy no seating space. Incoming air (40 per cent from outside) passes over both cooling and heating coils, permitting dehumidification without cooling if desired. Condenser is located at rear of roof. It is cooled by hydraulic-powered fans as illustrated



said "Yes" and only a low 0.6 per cent said "No".

In summary, it would appear that the New York bus was extremely successful in phase one of the experiment — namely that it is possible to air condition a city bus within ideal limits. But it should be remembered that this GM — Trane unit has higher capacity — a 10-ton rating — than most of the other units and the cost has not been announced.

### New York City Transit

Across town in Brooklyn, New York City Transit Authority has a new Mack unit equipped with the Tropic-Aire—Carrier system. It was factory installed and varies in minor detail with the Gulf Transport unit pictured on page 67. The vertical ducting is just ahead of the rear door and a Continental diesel auxiliary engine is used. But basic elements are similar.

Unfortunately the bus did not arrive until late September so Hyman Feldman and his assistants can report no actual warm weather operating experience. However they do indicate that the equipment appears extremely satisfactory, and they are looking forward to complete tests during the summer of 1957.

### Niagara Frontier Transit

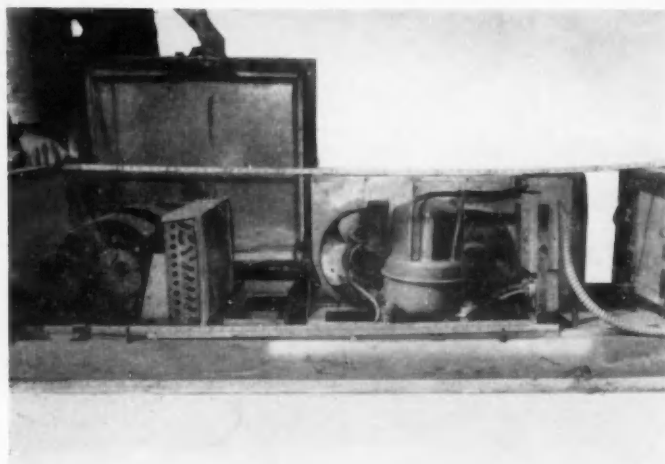
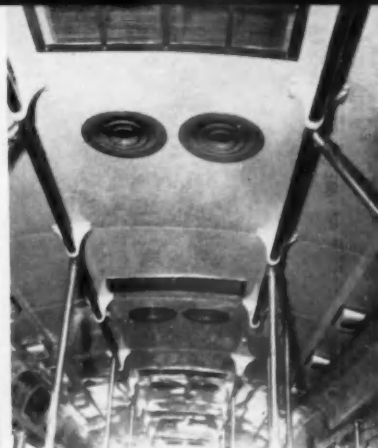
In Buffalo, N. Y., Niagara Frontier Transit has three Mack units, again similar to the Gulf Transport and New York Transit buses. Two of them have a 7-ton Tropic-Aire—Carrier system and one has a 5-ton unit. All have the Continental diesel auxiliary and all were factory installed at the Mack plant.

But Niagara Frontier has considerably more experience with at least one full summer season under its belt. Supervisor Walter McCausland reports that passenger acceptance has been good — approximately 85 per cent expressing a favorable opinion. They have been able to maintain temperature differentials of approximately 10-deg and humidity of about 10 per cent age points below outside conditions. He estimates the cost of these units, when as and if ordered in quantity, between \$2500 and \$3000.

It should be noted here that the Mack "Dream" bus again has exactly similar equipment. All reports of demonstrations since the unveiling at the American Transit Assn. meeting in St. Louis have been extremely favorable although no really hot weather has been encountered yet with this unit.

(TURN TO NEXT PAGE, PLEASE)





FRIGIKAR installation at Dallas Transit is the most unusual. It uses five identical, electric-powered units mounted on the roof. Each has a 1-hp compressor with condenser and evaporator rated at 1½ hp. Electric power comes from a 10 kw, 220-volt Onan generator, mounted under the floor and powered by a 20-hp air-cooled engine

EACH of the five units has its own cool air discharge and warm air pick up louvers in the roof (see top photo). Air volume for each is 400 cfm for a total of 2000 cfm for once-a-minute air change in bus

AT LEFT is detail of one of the units showing location of compressor, condenser and condenser fans (behind compressor), evaporator coils and sirocco-type air circulating fan. Cover for units has a 2-in "Styrofoam" insulation. Baffles between units keep warm air discharged by one unit from being circulated through other units so as to cut cooling efficiency

## ... Air Conditioned Buses

Continued from page 69

### Gulf Transport

From Gulf Transport's C. B. Beaird comes the only report of a *modification* using the Tropic-Aire—Carrier equipment. It is pictured in some detail on page 67 and was installed by the Blitz Body Corp. in Chicago. This company now has 28 air conditioned buses in its entire fleet, but the four of direct interest to city bus operators are in suburban service near St. Louis. They are TDM-4509 CM models, modified to take the Tropic-Aire—Carrier equipment underneath with vertical ducting to the roof.

The conversion cost for these units was in the neighborhood of \$5000, about equally divided between equipment and installations. Mr. Beaird reports excellent customer acceptance and adds this comment beyond more temperature and humidity control:

"One of the propelling factors in our deciding to air condition our four suburban buses was the fact

that these operate from bus stations. Naturally there is some waiting at the time of loading. Also, the windows on this model open from the top. It ruffled the hairdress of the lady passengers". This of course has been eliminated with the air conditioned units.

### San Antonio Transit Co.

Most experienced user of all is San Antonio (Texas) Transit. Their 50 units have been in continuous operation since 1947. All are ACF-Brill Model No. C-36 with underfloor engines. The basic Tropic-Aire—Carrier unit is installed in the rear compartment, uses a 16-hp auxiliary engine operating on LP Gas fuel, as does the main engine. One of them was installed in the factory, the other 49 in San Antonio's own shops. The approximate cost of the installation in 1947 was \$2000.

(TURN TO PAGE 114, PLEASE)



# Look Before You Lease

**Interstate Commerce Commission says its new leasing regulations cancel all previous rules, go in effect February 1, 1957**

THE INTERSTATE Commerce Commission has issued a new set of leasing regulations. They supercede all previous leasing rules and go into effect Feb. 1, 1957.

In general, the regs apply to:

1. Vehicles leased by common and contract carriers other than interchange agreements between common carriers.
2. Vehicles interchanged between common carriers.
3. Rental of vehicles to private carriers and shippers by for-hire carriers.

Here's the score on the two big issues; (1) generally leases have to be for 30 days or longer, and (2) lease compensation may be a share of the revenue.

## Usual Leasing

Here's how the new regs cover the usual lease—the lease of vehicles by a common or contract carrier other than through an interchange agreement. Exceptions to the rules outlined below are briefed in a separate section further on under the heading “Exceptions.”

The ICC says three things about these new leasing regulations. First they are an “absolute minimum.” Second, some rules included in earlier versions have been eliminated. Third, the “eliminated” rules may require consideration “at some future date.” COMMERCIAL CAR JOURNAL has prepared this special summary of the new rules to help clarify the regulatory language. Actual text of the new regs can be obtained by sending 15¢ to Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., and asking for a copy of the Federal Register for Thursday, Dec. 6, 1956.

First item is the lease contract itself. It has to be in writing and signed by the carrier renting the vehicle and the owner of the vehicle (or their authorized representatives). It must transfer from the owner to the carrier renting the vehicle exclusive control and complete responsibility for its operation.

The contract also “shall specify the compensation” to be paid as vehicle rental.

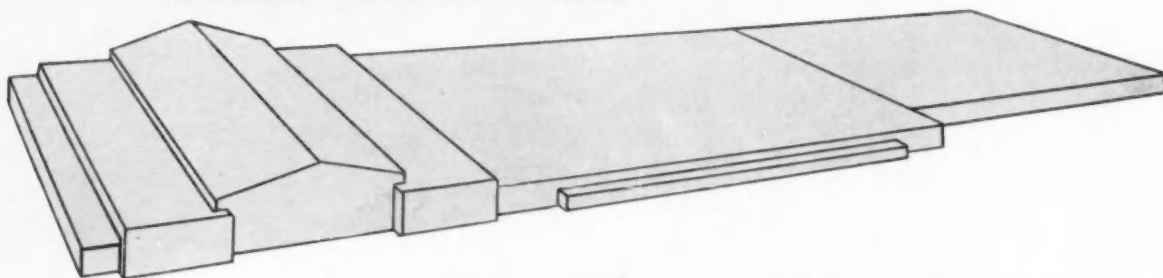
When the vehicle is to be operated by its owner or his employee, the lease must be for 30 days or more. Furthermore, the contract has to give the time and date (or

circumstances) of when the lease begins and ends.

At the time the renting carrier takes over the vehicle, he is required to give the owner a receipt that (1) identifies the vehicle and (2) gives the time and date the vehicle was turned over to the carrier. The owner has to give the carrier a similar receipt when the vehicle is returned. Times and dates of these receipts must coincide with the beginning and ending time given in the lease contract.

Three copies of the lease are required. One goes to the carrier, one to the owner and one is to be  
(TURN TO PAGE 126, PLEASE)

# ARBA Road Show



## Displays Equipment



### CONSTRUCTION EQUIPMENT

	No. Units
Pickups and automobiles	2,600
Trucks, 1½-3 tons	9,600
Trucks, over 3 tons	8,500
Trucks, miscellaneous	1,800
Tractors, crawler, including attachments	4,500
Tractors, 2- and 4-wheel, contractor's	3,000
Scrapers, hauling, all types	3,200
Off-highway hauling equipment, end, side, bottom dump	1,800
Power cranes and shovels	3,000
Motor graders	2,500
Rollers, all types	2,500
Loaders, front end, wheel	1,600
Ditchers and trenchers	250
Hydraulic hoists and dump bodies (not included in total here but as integral parts of other equip.)	16,000
Air compressors, portable	2,250
Batching plants, concrete	300
Concrete mixers, portable	1,200
Contractor pumps	2,340
Concrete pavers	150
Concrete spreaders	175
Concrete finishers	175
Truck mixers and agitators	1,500
Asphalt plants, portable	200
Bituminous pavers (spreaders and finishers)	300
Bituminous distributors, truck mounted	250
Crushing and screening plants, portable	250
Miscellaneous units (10%)	3,144
	57,084

$$57,084 \times 2 \times 2\frac{1}{2} \text{ or } 7\frac{1}{2} = ?$$

Figures shown are American Road Builders' Assn. estimates of the equipment needed to build \$1 billion of highways in one year. Average life of this fleet, says ARBA, is 6.9 years. So to estimate the total fleet required to build the highways proposed in the country's 13-year program, you'll have to do two things. Since the fleet has to be replaced at least once, double the data shown above. But we are going to build more than \$1 billion of highways a year. Actual amount probably will vary between \$2½ billion (\$33.1 billion in 13 years) and \$7½ billion (\$100 billion in 13 years). So after doubling the figures, multiply by somewhere between 2½ and 7½. Resulting figures will give you an idea of the total fleet needed to build the highways of the 13-year program. They will also help you measure the demand for the equipment being shown at next month's Road Show.



# for Construction Fleets

**First such exhibit in nine years is expected to include some 5000 pieces of equipment from about 260 makers**

**V** CONSTRUCTION FLEETS are more than a bunch of trucks, as the American Road Builders' Assn.'s 1957 Road Show opening late this month in Chicago will demonstrate. About 260 manufacturers are expected to display some 5000 pieces of equipment, large and small, at the show—first in nearly nine years.

For some idea of what the highway building fleet includes, the major categories are listed in the chart at left.

The Road Show, scheduled for Chicago's International Amphitheatre Jan. 28—Feb. 2, is being held at the same time as the 55th annual convention of the Road Builders' Assn. The two events are expected to bring together more than 45,000 contractors and others associated with highway construction.

## Giant-Size Exhibit

To house this display, the entire International Amphitheatre will be used, (see building outline above) including the Arena, both floors of the North and South Halls, the Exposition Hall and Donovan Hall. This represents about 525,000 sq ft of floor space. Exhibitors are members of the Construction Industry Manufacturers Assn. which is associated with ARBA, or of the Materials and Supply section of the Road Builder's Assn. itself.

In the exhibition will be tractors of all kinds—cranes and shovels, draglines, dredges, all types of buckets, graders of many types, huge off-highway equipment,

concrete and bituminous processing equipment, and many kinds of auxiliary and miscellaneous equipment. Many of the exhibitors will show entirely new models, descriptions of which they declined to release in advance of the show.

At the sessions of the ARBA convention, to be held at the Congress Hotel, a number of important political figures will speak, including Senator Albert Gore, of the Committee on Public Works, and the Hon. George H. Fallon, of the House Committee on Public Works, and co-author of the Federal Highway Act. A program of technical papers by authorities in many phases of highway building, planning, and maintenance has been arranged, along with symposiums at which panels of experts will answer questions about the problems of contractors and others.

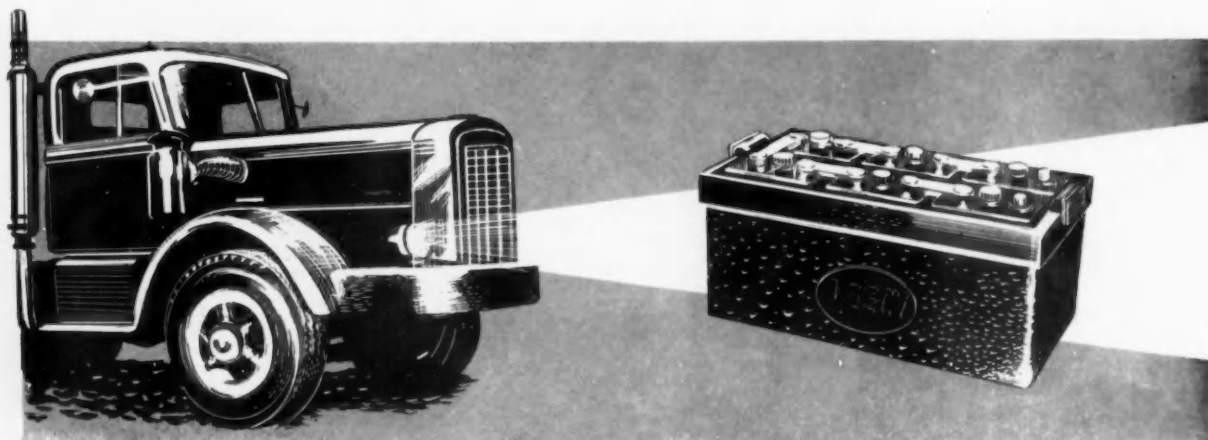
## Productivity Emphasis

Theme of the show "Productivity on Parade," emphasizes the role of construction machinery in reducing highway construction costs.

Some idea of the rate at which this productivity parade is moving is given by a spokesman for the equipment manufacturers, using tractor horsepower as an index. In 1935, tractor horsepower was about 95, and the operator received about \$1.09 per hour. By 1941, horsepower had risen to about 113, and wages to about \$1.50. In the year of the last Road Show—1948, horsepower was 130, and wages \$2.25, while in 1955 horsepower had risen to 230 and wages to \$3.25. The coming show will reflect this progress, with a glimpse of the continuing trend for the future.

Importance of productivity to the public is shown by the studies of a group of cost experts in the Bureau of Public Roads. If contractors were to use the machinery and methods of 30 years ago to build today's highways, present roads would cost nearly twice as much as they do, the experts calculated.

(TURN TO PAGE 144, PLEASE)



# There's Better Electrical

Four experts take a look at truck and bus cranking motors,

**▼ YOU CAN LOOK FOR** better vehicle electrical equipment in the future. And some of it is available now, if you're willing to pay the higher initial cost.

Who says so? Four speakers at the recent SAE National Transportation Meeting:

- H. L. Hartzell, Delco-Remy Division, General Motors Corp. — "Electrical Equipment — Heavy Duty Progress."

- G. W. Hostetler, International Harvester Co. — "Electrical Trends in Motor Trucks."

- R. H. Bertsche, GMC Truck and Coach Div., General Motors Corp. — "Trends in Motor Coach Electrical Systems."

- J. V. Poticny, The Leece-Neville Co. — "New Look in Series Parallel Systems."

## Basic Trends

Among the predictions of specific developments, you can pick out three basic trends:

1. There'll be more emphasis on making equipment last longer, with

a target of 100,000 maintenance-free miles for many parts.

2. How soon you'll get this better equipment will depend on your willingness to pay for it and your insistence on getting quality.

3. Demands on the electrical system will continue to grow.

## Cutting Costs

From Delco-Remy's Hartzell came these ways to cut your electrical equipment costs:

1. Order true heavy duty electrical units to meet severe operating requirements if you want to keep expensive down-time to a minimum.

2. If you order passenger car-type equipment, have it modified to increase its life.

3. Let the manufacturers know what improvements you want. Tell them frankly that you're willing to pay for items which may increase the vehicle's initial price but which will reduce maintenance costs. Base your buying decisions on the combination of initial costs, plus maintenance and repair costs, plus the

cost of equipment "down-time."

4. Establish better communications with vehicle and electrical manufacturers to speed up diagnosis and correction of your problems.

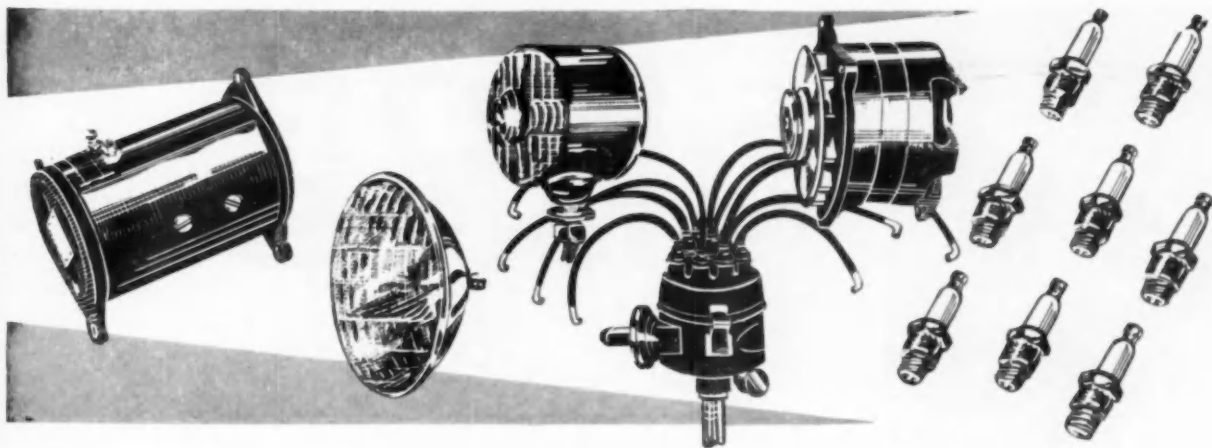
5. Take advantage of the manufacturers' field schools for your mechanics.

## Starting Systems

What voltage to use for cranking motors continues to be a problem. Large gasoline engines and small diesels now use 12-volt, heavy duty motors with outputs up to 5 hp. Larger diesels use 24-volt cranking motors which develop 10 to 14 hp.

High torque and speed requirements for starting larger engines led to the use of the 24-volt cranking system. But 24-volt lighting and accessories were not available, so the 24-volt cranking, 12-volt operating system was introduced. Complications in servicing these systems in off-highway equipment led some manufacturers toward using either straight 24-volt or





# Equipment Ahead

**ignition, generators, voltage regulators, lighting**

split 24-volt systems. On off-highway equipment which does not have to meet state lighting requirements certain compromises may be made to use 24-volt lamps. To date, satisfactory 24-volt units are not available for highway vehicles, Hartzell said.

Hostetler noted that the 24-volt system is finding increasing favor over the series-parallel, 12-24 volt system. The reasons: the series-parallel switch is expensive and is "a continuing source of service and operating trouble."

Leece-Neville's J. V. Poticny described a new series-parallel switch which may solve these problems. The new design combines a series-parallel switch and magnetic switch into one unit. It requires substantially less wiring, lowers line losses and reduces the chances of mixing or reversing wires. Using one coil instead of the two formerly needed, it needs less current.

Other developments noted by the speakers:

Heavy duty cranking motor clutches with overrunning positive engagement are now available. They have good load and durability characteristics, will lengthen ring gear life and aid starting in cold weather.

Military adoption of a standardized negative ground system, and its approval by SAE, will affect commercial models and there will be an increasing but gradual trend toward negative ground systems.

## Few Ignition Changes

Distributor-coil ignition systems seem to be likely to be around for a while. Other systems, including radio frequency voltage generators, are under study, but they're still in the labs. Magnetos are available, but they're more expensive and offer no provision for part-throttle, vacuum sensitive spark advancement.

Voltage requirements have been going up, and the trend to V-8 engines has reduced the time available

for the coil to build up the magnetic field which produces the spark. Distributors with double breaker points offer adequate relief in this matter, but they're more expensive and need servicing. The 12-volt system also provides a sometimes necessary bonus ignition voltage for cold starting.

In the heavy duty field, recent improvements include caps and rotors with higher voltage handling ability and, in some cases, better bearings. Sealed ignition coils and condensers that will last as long as the vehicle have been available since 1940. Distributors with cam lubricators, sealed breaker compartments and shock absorbing drives have also been available for a long time.

## Generators

Growing use of mobile radio in fleets has increased the demand for low cut-in speed generators. The AC system (or alternator) is particularly useful where load is high,

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# SHOP HINTS

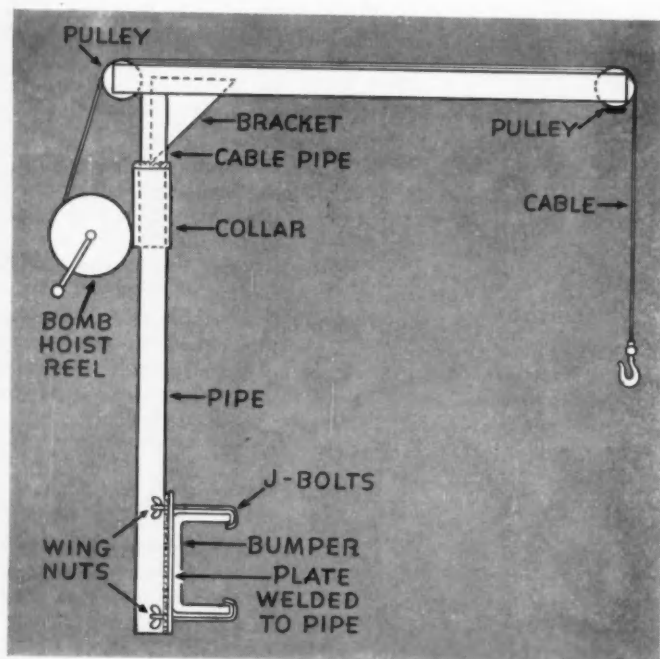
**\$10** →

**\$25**

Send us a short description and photograph or simple sketch of the shop-made maintenance short cuts you are using. We'll pay \$10 and \$25 to those who submit good ideas

## Handy Hoist Attaches to Bumper

From the shops of Frisco Transportation Co., Tulsa, Okla.



Starting with a 1000-lb Air Corps bomb hoist, we made this road service hoist in our shop. It attaches to the bumper of a disabled truck and enables us to lift out the engine head, generator or starting motor easily. Two lengths of 2 x 2½-in. angle iron are welded together with flat bar stock leaving just enough space between them for a pulley at each end.

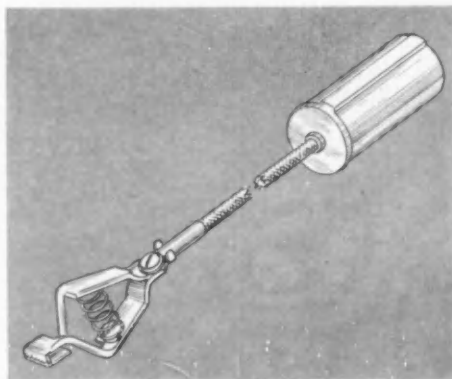
One end of this beam is welded to a short length of 1½-in. pipe. On the other end of this pipe is welded a short collar with slightly larger than 1½ in. ID. The bomb hoist reel fastens to this collar as shown. A short brace is welded to the pipe and the arm to provide necessary strength.

Collar fits over a longer length of 1½-in. pipe and swivels freely. Bottom of this pipe is welded to a bumper clamp designed as shown that easily fastens on to the vehicle's bumper.

## Extension Cable Checks Trailer Lights

By Elmer C. Shirey, Fort Wayne, Ind.

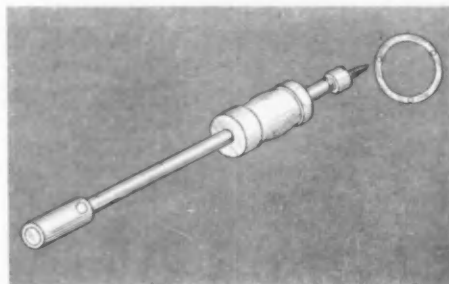
This extension cable permits checking trailer lights when the tractor is disconnected. Remove male plug from a standard cable, join the internal cable wires together and install a large universal clip as shown in sketch. To check lights, clip the end of the cable to a battery and ground the trailer. Insert the plug into the trailer socket. All the lights can be checked at one time.



## Slide Hammer Removes Oil Seals

By Clifford P. Ballard, Shop Foreman, Hudson Transit Lines, Mahwah, N. J.

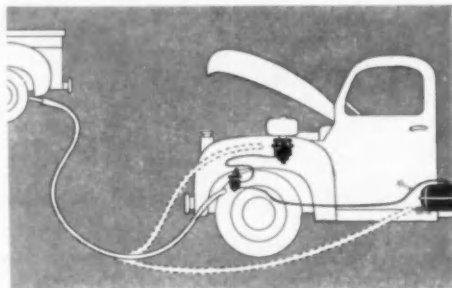
Construction of this tool for removing oil seals is similar to that of a slide hammer. Difference is that a screw is welded to the one end. Drill three evenly spaced holes in the metal edge of the seal, screw the tool into the first of the holes. One or two pulls at each hole location usually does the trick. Our biggest use is in removing front crankshaft oil seals. It can also be used to pull expansion plugs.



## Portable Heat Aids Starting

By Arthur Davis, Mechanic, Oxford Paper Co., Rumford, Me.

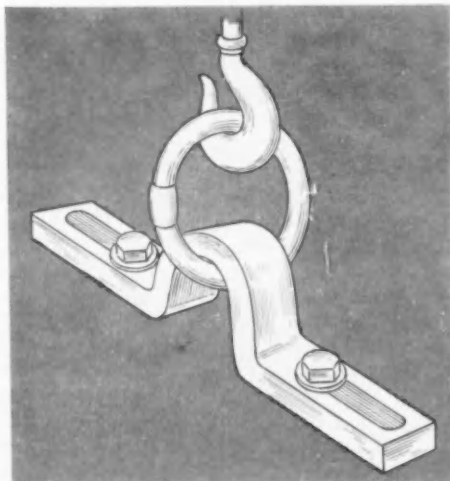
A 2-in. rubber hose is attached to the exhaust pipe of the service truck thus allowing penetrating heat to flow to the various sections of a vehicle that may be frozen or too cold to start. This is most helpful for vehicles that are left overnight in freezing weather. As any mechanic realizes, moving a vehicle with a frozen fuel system can be very troublesome and somewhat dangerous.



## Humped Bar Aids Engine Lifting

By Stanley Clark, East Bradenton, Fla.

A universal engine lifter, this bent bar of  $\frac{5}{8}$ -in. thick steel is made from  $1\frac{1}{4}$ -in. wide stock. Slots enable its attachment to a variety of engines by merely replacing two cap screws with longer bolts. We use a lifting ring under the hump of our lifter to get an even pull. A piece of  $\frac{5}{16}$ -in. rod welded under the hump helps it maintain its shape and position. Ring is made from a piece of  $\frac{3}{8}$ -in. rod welded together. One of the main advantages of this lifter is its maneuverability when installing an engine assembly.





These "Before" and "After" views of a carburetor show solvent detergents' effectiveness. Two-phase solvent soaked off even varnish-like soil around fittings without brushing or sandblasting

## Speed Parts Cleaning with SOLVENT DETERGENTS

**These fast acting compounds dig into even heavy deposits to soften them up for easy rinsing. They're safe, need no heat**

**V** AT TIMES, parts cleaning can be a difficult, dirty, distasteful job.

One of the best helpers you can use is the solvent detergent. These cleaning compounds not only remove oil and light grease—they go after heavy deposits such as asphalt, tar and even carbon.

They are mixtures of solvents and surface active agents that dissolve, wet out, penetrate and emulsify soils. You might say that they work in two ways. The solvent first thins out the grease binders and carries the surface active agent to the solid particles in the soil. One end of the surface active agent molecule fastens

like a hook into the grease-covered particles of the soil deposit. The other end hooks into the rinse water when it comes along. Since the attraction between the solvent detergent and dirt is greater than that between the dirt and the surface, and the attraction between the detergent and rinse water is even stronger, when the rinse water is applied it rips the dirt away from the surface.

### Several Advantages

Solvent detergents offer five advantages:

- First and second, they clean faster and rinse more freely. A

municipal transit company, for instance, switched from a solvent-type cleaner to a solvent detergent to clean motors. They had discovered that the solvent was not soluble in water and was very hard to wash off. They tried a solvent detergent, found they could clean in half the time, had no trouble rinsing with water, and needed less material to do the cleaning.

- Third advantage is the fact that solvent detergents don't need heat to do the job. That's a big factor in a shop where the volume of cleaning doesn't warrant installing hot tanks for alkaline solutions or steam cleaning units.

## By R. L. Fiske

Manager, Automotive Industries Div.,  
Oakite Products, Inc., New York, N. Y.

● Fourth advantage of solvent detergents is their safety in terms of fire hazard and surfaces cleaned. Most of these materials have higher flash points than straight solvents, ranging from 125° F up. Some of them will not burn under any conditions. The ones that will burn are more easily controlled, since water will emulsify them and the water emulsions do not burn. One of the solvent detergents used in automotive service work can be used in a water solution. Another is a two-phase material with a layer of water above the solvent. In both cases, any fire hazard is practically eliminated. Solvent detergents may be used safely on all metals found in automotive parts. Some are also designed for use on painted surfaces and will not affect the paint even while quickly removing oil and grease deposits.

● Fifth advantage of solvent detergents is their economy in use. Some of them, including the paint strippers, are used straight, but for most purposes they are mixed with from four to 10 parts petroleum distillate, mineral spirits or even water. Their long life in solution and the speed with which they clean result in still further economy. A shop specializing in carburetor work, for example, used the same 40-gal tank of solution for a period of five weeks. They cleaned an average of 20 carburetors a day during that time. The average cleaning time per carburetor was cut from 25 to five minutes.

### How to Use Them

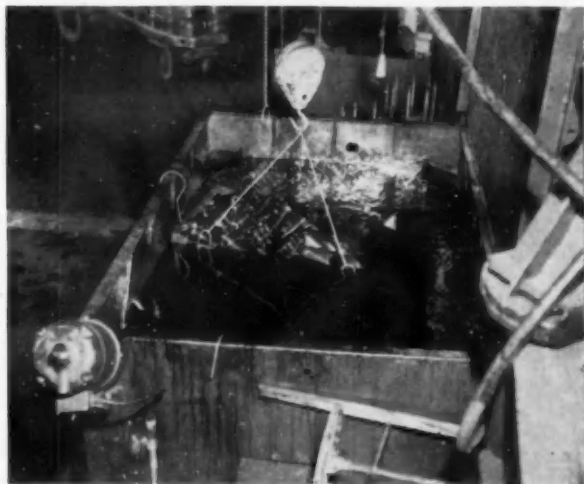
There are dozens of ways in which solvent detergents can fit into your maintenance activities, but it's in cleaning parts in the shop that they really go to work for you. With a parts cleaning tank, the solution does the work. The man in charge of cleaning needn't watch the tank or scrub the parts—he's free to do other work around the shop while the parts soak.

The tank may be any suitable container, from an old oil drum to a custom built job. If the volume of work is sufficient to justify it, it may be desirable to have the tank made for the job. The best tanks are fabricated of hot rolled steel, welded at the seams, placed on a solid foundation in a convenient spot in the shop. The tank should be large enough to handle the biggest parts you'll want to clean—obvious, to be sure, but it's surprising how often this is overlooked. The tank should not be so low that there's danger of the worker falling into the solvent bath, nor so high that the solution will splash into his eyes. It is advisable to provide a self-sealing or tight fitting lid, as many solvent detergents lose strength through evaporation. It is also wise to see

(TURN TO PAGE 148, PLEASE)

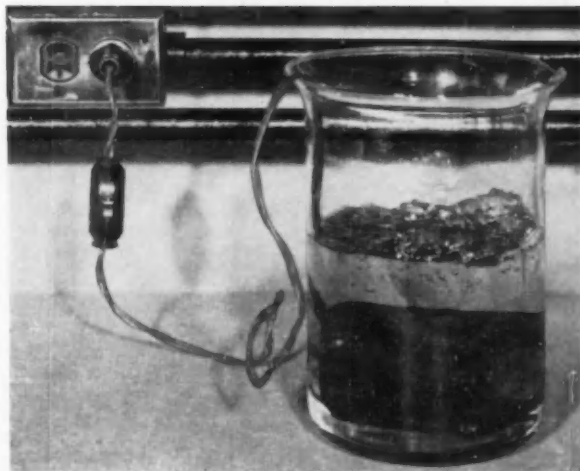


Moderately dirty parts may be sprayed with solvent detergents with a portable pump, as shown here. After a short soak, the detergent and soils may be rinsed off



Valve springs in a basket are degreased in a solvent detergent and kerosene solution. Agitator at left of tank keeps solution moving for better, faster cleaning

Oakite's Composition No. 116 was specially developed for electric motors and assemblies. Note that this motor is still running although immersed in solution



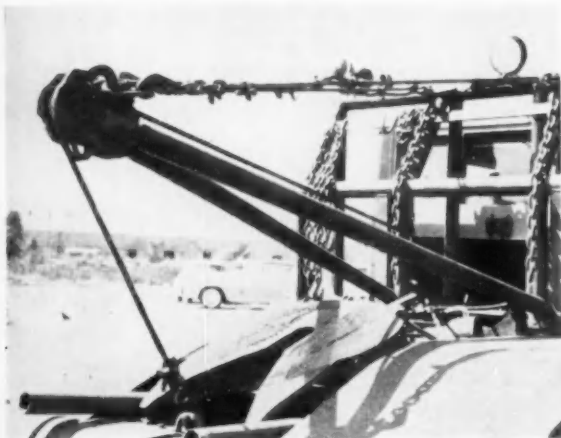




**FIG. 1.** "Mule" is a 1941 COE Autocar to which has been added a 9-ft wheel-base, a White engine, a GMC rear end

# Frisco's Mule Lifts Fore and Aft

**FIG. 2.** For fast rigging, pulley head has stub legs that slide inside booms



**FIG. 3.** Towed vehicle can be pulled-up tight, thus avoid "jitterbugging"



**Emergencywise, this fleet-built crash wagon  
"can do almost anything." Rearward, it lifts  
up to 30,000 lb. Front booms "snake" 1000 lb**

**By Claude Barber,** Division Shop Superintendent  
Frisco Transportation Co., Tulsa, Okla.

**W**HILE WE have a right good safety record here at the Tulsa, Okla., division of Frisco Transportation Co., occasionally we have to clean up some wrecks that are dillys. As a result, we have developed an emergency service truck (Fig. 1) that can do almost anything within reason.

Starting out with a cab and chassis, we've added gear to the truck every time we've been stumped by a problem for which it wasn't equipped.

Its official name is "King Kong" around the yard, but we call it a "mule," because it's a cross-breed if ever there was one. Cab, frame, and the original engine were from 1941 Autocar COE, with sleeper cab. We gave it a 9-ft wheelbase. We've now replaced the original engine with a White engine which was available, and a GMC rear end has been installed.

#### **In General . . .**

The short steel platform body is sloped at the back to permit a fifth wheel to be installed without conflict with the permanent roll bumper on the back. A well in front of the fifth wheel holds hydraulic jacks and wood blocks.

The "headache rack" is secured with U-bolts to the platform just behind the cab. The rack is made of heavy 3-in. pipe welded in three passes at every joint. A double set of risers gives it a wide footing on the platform. All our boom positions are guyed to the top of the headache rack.

Booms are 8-ft lengths of double strength 3-in. pipe. Two boom legs join in a detachable pulley assembly with stub legs that fit down in the ends of the pipe. At the bottom, the booms end in pads that fit into slots on the roll bumper for lifting, or into the bottom of

the headache rack for towing. (Fig. 2)

#### **Lifting from the Rear . . .**

Four-fifths of the weight of the Mule is in front of the headache rack. Therefore when lifting from the rear position it can pick one of our regular road tractors entirely off the ground and run 200 miles without daylight showing under the Mule's front wheels.

The rear winch uses a standard power take-off with a sprocket chain drive. With the boom practically erect, and with the  $\frac{5}{8}$ -in. winch cable passing through a snatch block hooked to the roll bumper and thence to the boom pulley, we can get a 30,000-lb lift.

#### **For Towing . . .**

Here's how we fix the mule for towing (Fig. 2). Angle irons welded beside pipe uprights on the headache rack provide slots for the pads or spurs on the bottoms of the boom. The guying cables end in heavy chain. These fit in keyhole slots burnt into pads projecting back from the top of the headache rack.

Four slots are cut in the roll bumper for the boom spurs when the boom is in lifting position. The longer boom requires slots further apart, although we also set the short boom wide when there is likely to be a strong side thrust to the lift. The slots are reinforced on each side with straps welded to the roll bumper.

#### **Towing a Tractor . . .**

The flare of the block plates around the pulley permit the tow cable to be pulled up taut enough for the second chain link on the hook to lodge firmly between the plates. This holds the towed vehicle in place (Fig. 3) without the jitterbugging that occurs when there is the slightest length of suspension cable below the pulley.

Since the bumper of the towed truck is practically over the roll bumper of the Mule, the trailing vehicle will follow as docilely as though it were pinned to the fifth wheel. Also its nose is high enough so the pulley won't be jabbing the radiator.

(TURN TO PAGE 118, PLEASE)

**FIG. 4.** One use for separate winch in front is for retrieving spilled cargo



# Tubeless Truck Tires

Answers to most-asked questions show that much has been learned

By Len Westrate

This size tubeless tire	Replaces this size tube-type tire	And, with this ply rating	Is rated for this MAXIMUM load (lb.)
6.00x16	6.00x16	6	1255
6.50x16	6.50x16	6	1420
7x17.5	7.00x15, 15 in. HD	6 8	1520 1800
7x22.5	6.50x20 6.50x20, 7.00x20	6 8 10	1870 2180 2480
8x17.5	7.00x16, 7.50x15, 7.50x16	6 8	1735 2060
8x19.5	7.00x17, 7.50x17	6 8 10	2090 2440 2850
8x22.5	7.50x20	8 10	2740 2980
9x22.5	8.25x20	10 12	3330 3600
10x22.5	9.00x20	10 12	3960 4280
11x22.5	10.00x20	12 14	4580 4930
11x24.5	10.00x22	12	4980
12x22.5	11.00x20	12 14	5150 5540
12x24.5	11.00x22	12	5480

Adapted from data supplied by Rubber Manufacturers Assn.

WHICHEVER SIDE of the tubeless tire question you take, you will find measurable support. Today, a year after tubeless truck tires were introduced as original equipment by many truck manufacturers, there still is a great deal of divided opinion as to whether the move was a wise one.

Defending tubeless are most of the truck manufacturers, the large tire companies, and many large fleet operators who have had good experience with them. Speaking for the negative are other fleet operators, some tire dealers, and some truck dealers.

There is no denying that the first year of tubeless truck tire operation in the industry has witnessed some difficulty. On the other hand, proponents of tubeless say that the troubles have not been extensive and no more than might be expected with a totally new product. One rubber company executive says the situation is very similar to that when diesels first were introduced. That, too, was a new and different product and it was some little time before there was adequate information in the field on maintenance and service.

## The Fleets Ask . . .

Nonetheless, many operators have been asking some searching

questions indicating either unfavorable personal experience or word of mouth impressions arising from conversation with other operators. Among them are these:

Did the truck makers and tire builders jump off the deep end too soon when they introduced tubeless as original equipment?

Was there enough road testing, manufacturing experience, and adequate education on field servicing back of tubeless?

Why did some manufacturers who started out 100 per cent back off and offer tubeless or conventional as an option? What is the trend now?

What about recapping? Is tread separation more common than with tube tires?

Can the spare be eliminated?

What about rim denting?

Why tubeless anyway?

## Here Are the Answers . . .

In order to clear up some of the confusion and to give fleet operators as concise and up-to-date a picture as possible on the current tubeless truck tire situation, I went to the most logical source for the answer to these questions—the large truck tire builders. We also checked with a number of truck manufacturers and with fleet operators using tubeless tires. Naturally, individual ques-

# —Boon or Bust?

from first year's experience

Detroit News Editor

tions were not all answered the same way by all companies, but there was enough general agreement to come up with a composite reply representative of tire industry opinion.

- **Why have tubeless tires in truck sizes?**

They offer lower tire cost per mile. It generally is agreed that tubeless tires give greater mileage because they run from 10 to 20 deg cooler. Down-time is reduced because of the puncture sealing tendency which prevents or greatly slows the loss of air in all but major punctures. This enables the operator to complete the run and repair the tire at the next terminal. In addition, temporary repairs can be made right on the wheel with a plug kit. Another important advantage for tubeless tires is the greatly reduced chances of blowouts.

From Yellow Transit Freight Lines' Bill Riley comes this comment: "Road delays have been reduced 70 per cent; run-flats are now virtually nonexistent. We have not run enough tires yet to know what our tread wear will be, but it appears to be better."

- **Did truck manufacturers jump the gun on introducing tubeless?**

Tire company representatives are noncommittal on this point, but the truck builders believe that

it was necessary to make a start somewhere and that test experience had been satisfactory enough to support introduction of tubeless last year. However, an objective appraisal would indicate that they may have been a bit hasty in view of some rim and tire structural changes that came about later in the year. Complaints from smaller operators about lack of adequate servicing is another very real problem.

On the other hand, many millions of miles of testing did go into tubeless before introduction and in view of the many operators who had entirely satisfactory service it must be said that the truck builders had a logical basis for expecting tubeless to be reasonably trouble free.

- **Are tubeless truck tires here to stay?**

Tire manufacturers and truck builders say definitely "yes." Conceding that there were some early problems that had to be worked out and that there still may be a few

minor difficulties, they feel that recent experience of operators who understand both maintenance and service on tubeless points to a steady increase in their acceptance.

Undoubtedly the program did not move ahead as fast as had been expected when truck tubeless were introduced. But as operators realize the advantages and become more familiar with tubeless and as improvements come along, as they undoubtedly will, their confidence in and acceptance of tubeless will increase.

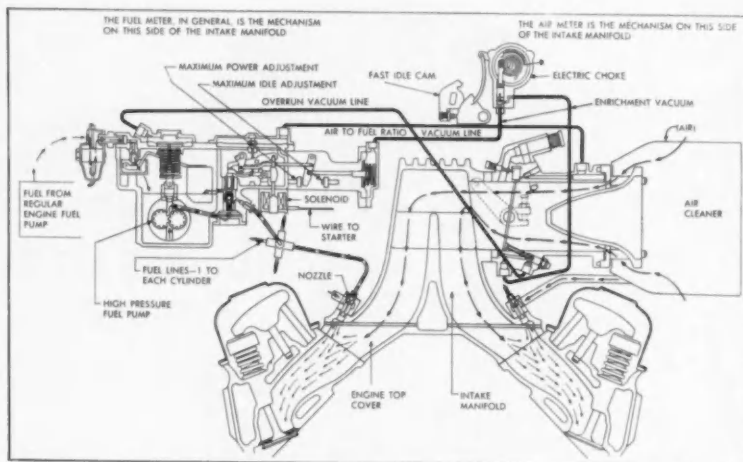
- **Why are truck makers, who started out on 100 per cent tubeless basis, now offering conventional tires as an option?**

They have been forced to do so by the pressure of competition. Some operators for one reason or another have not wanted to go into the tubeless program and have even refused to buy a certain make truck unless they could get it with conventional tires. There

(TURN TO PAGE 162, PLEASE)



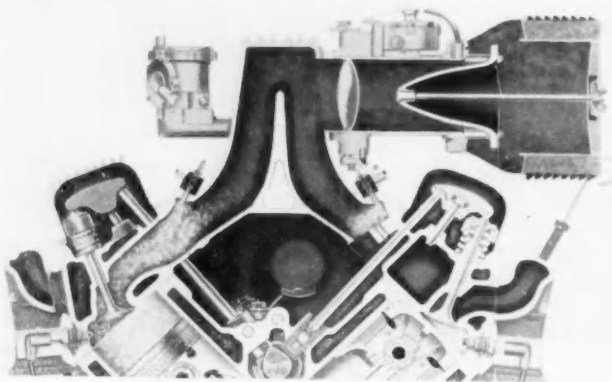
# Fuel Injection Gets Toe Hold



**MAJOR PARTS** of fuel injection system are illustrated in unit being offered by Chevrolet—(1) fuel metering system with direct injection into each cylinder, (2) controlled air supply to cylinders and (3) system of manual and automatic controls to provide proper fuel-air mixture under varying operating conditions

**By Joseph Geschelin**

Detroit Technical Editor



have a special system up their respective sleeves.

## Who's Got It?

Early in the car announcement splurge last fall, Chevrolet sprang a surprise by introducing Rochester fuel injection system as optional equipment on the Corvette and on the rest of the line when production was established.

Since then Pontiac has announced the availability of fuel injection in its Bonneville sports car. And the AMC Rambler sported fuel injection on the Rebel model at the New York Auto Show last month. This one will use the Bendix electronic system which sells, reportedly, for less money.

## Cost Problem

Let's take a look first at the cost of fuel injection. The only figures released publicly so far are for Chevrolet. This system has a price tag of about \$485. Despite the advantages of fuel injection, it is hardly likely that huge sales will be made at this price.

Holley Carburetor announced middle-of-last month a fuel injection system said to replace a 4-barrel carburetor without requiring major manifold modifica-

(TURN TO PAGE 154, PLEASE)


**Announced on three passenger cars for '57, its status today is that of a high cost and low production item**

WHAT'S ALL the noise about fuel injection for gasoline engines? And what are the prospects for truck engines?

Fuel injection for passenger cars has been discussed for many, many years. But the development came to a head only a few months ago following announcements by

a large number of parts makers, including Rochester Products Division of GM, Bendix, Thompson Products, Holley Carburetor, Saaty, and Borg-Warner. We know now that other parts makers also are readying their own versions and it is quite likely that one or more car producers may





SURE, POWER STEERING  
MAKES THE JOB EASIER.  
BUT IT'S THE ADDED SAFETY  
THAT COUNTS MOST.

OUR POWER-STEERED  
RIGS STAY ON SCHEDULE  
BETTER, TOO.

EITHER WAY,  
POWER STEERING MAKES  
GOOD BUSINESS SENSE.

## THE CASE FOR POWER STEERING ON TRUCKS!

The trend to power steering on trucks is based on one very practical reason—operators of trucks equipped with power steering have invariably found that the added safety and greater operating efficiency of their vehicles have demonstrated that power steering is indeed a sound investment.

Truck drivers using power steering report less tension and fatigue in normal driving and appreciate the positive control that blocks road shock from chuck holes and prevents loss of control if the truck is forced out on a soft shoulder.

The dispatcher knows the importance of regularly maintained schedules. He is quite aware that with power steering drivers are more relaxed and are better drivers than tired drivers. Thus, power steering not only reduces the hazard of road accidents, but helps the driver to maintain established schedules through better vehicle control.

In short, power steering, by saving time and money, contributes materially to a more profitable operation.

Truck manufacturers are always eager to offer their customers features

that will make truck operation safer and more profitable and, at the same time, give their dealers every selling advantage.

That's why more and more truck manufacturers are offering performance-proven Bendix\* Power Steering as original factory equipment.

If you would like to know why power steering for trucks is perhaps even more logical than power steering for passenger cars, we have prepared an interesting folder on the subject.

Write for your copy today. We think you'll be convinced.

\*REG. U.S. PAT. OFF.

**Bendix** PRODUCTS DIVISION **South Bend** IND.





**Ford Announces**

# COE Tilt Cabs for '57

**Six "80-in." models rated up to 30,000 lb GVW are available**

**F**IRST OF FORD'S 1957 models to be announced is a new series of six COE tilt cab trucks. They replace last year's cab forward models, are rated from 18,000 to 30,000 lb GVW.

Driver's seat is at front of the cab, above and ahead of the engine. This permits a reduction in bumper-to-back-of-cab length to 80.3 in. compared to 111.1 in. for the heavy conventional truck. More weight on the front axle frees rear axle of 800 to 1100 lb of vehicle weight which can be used for additional payload, says Ford.

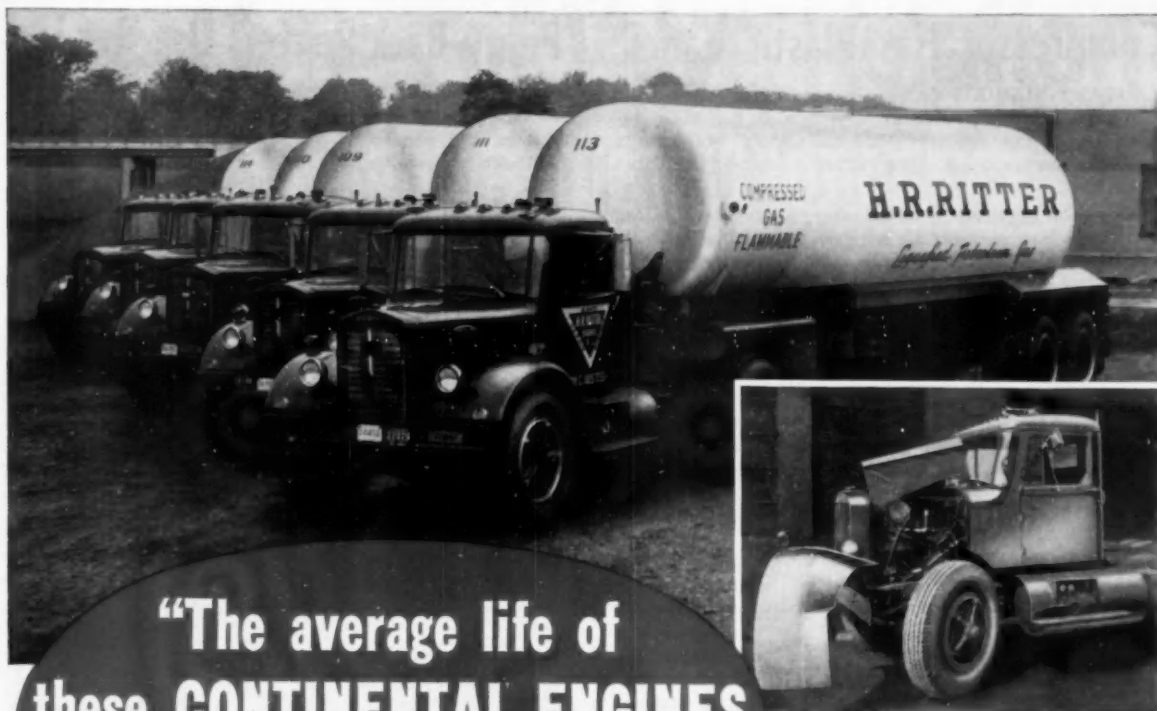
Shortened length also makes it possible to haul a 35-ft trailer and still be within a 45-ft overall length limit.

Each model can be ordered in four wheelbase lengths, from 99 to 153 in. A series of short stroke V-8 engines ranging from 171 to 212 hp is available.

Cab is hinged to the frame at the front, swings forward (TURN TO PAGE 116, PLEASE)



**CAB TILTS forward for maximum engine accessibility aided by large coil springs when safety catch is released**



**"The average life of  
these CONTINENTAL ENGINES  
has been 400,000 miles"**

**TALK ABOUT CONVENIENCE!** Swing-away front fenders of Brockway's Model 258-W make it easy to get at the engine for adjustment, inspection, or servicing. The five units at left above are powered by Continental R-6572 engine, running on LPG. They bring to 76 the number of Continentals in the Ritter fleet.

#### TRANSPORTATION GASOLINE ENGINES

Model	Cyl.	Bore	Stroke	Displ.	Bare Engine H.P.
N4062	4	2 1/4	3 1/2	62	26.3 @ 3500 RPM
Y4069	4	2 1/2	3 1/2	69	28.0 @ 3500 RPM
Y4091	4	2 1/2	3 1/2	91	36.0 @ 3400 RPM
F4124	4	3	4 1/4	124	47.0 @ 3200 RPM
F4140	4	3 1/8	4 1/4	140	52.0 @ 3200 RPM
F4162	4	3 1/8	4 1/4	162	58.0 @ 3200 RPM
F6186	6	3	4 1/4	186	77.0 @ 3500 RPM
F6209	6	3 1/8	4 1/4	209	90.0 @ 3500 RPM
F6226	6	3 1/8	4 1/4	226	98.8 @ 3500 RPM
F6244	6	3 1/8	4 1/4	244	105.0 @ 3750 RPM
M6271	6	3 3/4	4 1/4	271	96.5 @ 3000 RPM
M6290	6	3 3/4	4 1/4	290	108.0 @ 3000 RPM
M6330	6	4	4 1/4	330	125.0 @ 3000 RPM
M6363	6	4	4 1/4	363	146.0 @ 3000 RPM
B6371	6	4 1/8	4 1/4	371	123.5 @ 3000 RPM
B6427	6	4 1/8	4 1/4	427	142.0 @ 3000 RPM
K6271	6	3 3/4	4 1/4	271	114.5 @ 3200 RPM
K6290	6	3 3/4	4 1/4	290	123.0 @ 3200 RPM
K6330	6	4	4 1/4	330	147.0 @ 3200 RPM
K6363	6	4	4 1/4	363	162.0 @ 3200 RPM
T6427	6	4 1/8	4 1/4	371	143.8 @ 3000 RPM
T6471	6	4 1/8	4 1/4	427	170.0 @ 3000 RPM
U6501	6	4 1/2	5 1/4	501	178.0 @ 2600 RPM
R6513	6	4 1/2	5 1/4	513	182.2 @ 2800 RPM
R6572	6	4 1/2	5 1/4	572	220.0 @ 2800 RPM
R6602	6	4 1/2	5 1/4	602	232.0 @ 2800 RPM
S6749	6	5 1/2	5 1/2	749	250.0 @ 2800 RPM
S6820	6	5 1/2	5 1/2	820	275.0 @ 2800 RPM
V8603	8	4 1/4	4 1/4	603	240.0 @ 3200 RPM

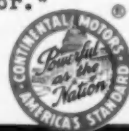
#### TRANSPORTATION DIESEL ENGINES

Model	Cyl.	Bore	Stroke	Displ.	Bare Engine H.P.
TD6427	6	4 1/8	4 1/4	427	116.0 @ 2400 RPM
RD6572	6	4 1/2	5 1/4	572	172.0 @ 2400 RPM
VD8603	8	4 1/4	4 1/4	603	182.0 @ 2800 RPM
SD6802	6	5 1/2	5 1/2	802	225.0 @ 2200 RPM

EXCERPT FROM A LETTER FROM THE H. R. RITTER TRUCKING CO., PARAMUS, N. J., TRANSPORTERS OF PETROLEUM PRODUCTS:

"Sixty per cent of our fleet is powered with Continental motors. We covered 2,433,600 miles last year and delivered 100,865,200 gallons of product, or approximately 322,000 tons, over level and mountainous terrain. The average life of these Continental motors has been 400,000 miles, with re-building costs approximately \$391 per 100,000 miles. Since using our first Continental, in 1946, we have replaced only one crankshaft. In all the units we have re-built, we have never ground a shaft. All in all, the fine performance given us by Continental motors has greatly contributed to our success as an over-the-road operator."

(Signed) "C. W. Rosencrans  
Vice president."



**Continental Motors Corporation**

MUSKEGON • MICHIGAN

4 EAST 40TH STREET, NEW YORK 17, NEW YORK • 6815 CEDAR SPRING ROAD, DALLAS 9, TEXAS • 2817 SOUTH SANTA FE AVENUE, LOS ANGELES 10, CALIFORNIA • 1002 GARDEN DRIVE, JACKSONVILLE, FLORIDA

## Compressor Has Plastic Vanes

**R**OTARY SLIDING VANE air compressors are becoming increasingly popular. One reason for their increased use: the discovery that the sliding vane design could be improved by using vanes made of laminated plastics.

Successful applications of the rotary sliding vane design now range from portable air compressors for the construction field to superchargers for automotive engines. The design has also been used successfully on air motors.

### Recent Applications

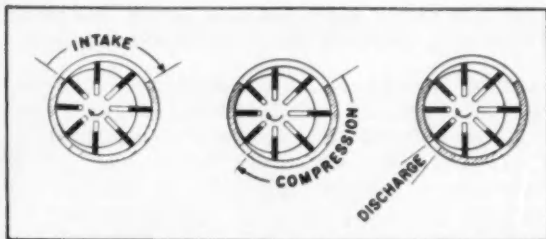
Among recent applications of this type of compressor:

Ingersoll-Rand uses it in its "Gyro-Flo" portable air compressor. Developed in conjunction with Synthane Corp., Oaks, Pa., this oil-cooled rotary sliding vane unit overcomes many of the limitations of a piston type design for portable service. Valves, pistons, rods and clutch are no longer used—a reduction of 40 per cent of wearing parts. To cool it, oil is injected into the air during compression. The atomized oil then mixes with the air and absorbs much of the heat of compression so that air temperatures are said to be at least 100°F lower than in other types of compressors.

Sliding vanes are used in the new supercharger, developed by Judson Research & Mfg. Co., Conshohocken, Pa. Designed for installation on 70 to 320-cu in. engines, the supercharger is said to give improved engine efficiency and fast acceleration. To lubricate the bore of the supercharger housing, oil is introduced with the gas and air mixture at the rate of one drop every six seconds. The supercharger lubricant also acts as an upper cylinder lubricant for better engine life and performance.

### Three Phase Operation

The three-phase operation of the unit is shown in the accompanying illustration. The sliding vanes are thrust



against the housing by centrifugal force, forming sealed-off compartments which provide the positive-displacement type of pumping action.

Since a plastic vane is softer than the metal housing, it is the vane that wears, rather than the housing. It is easier to replace a worn vane than to remachine or replace a worn housing.

Rotating drum is eccentric to the housing axis, the mixture entering the intake port when the volumetric capacity between two of the four rotor vanes is greatest. When the volumetric capacity between the vanes reaches a minimum, the pressurized mixture is released into the manifold. Due to chamfer on the blade, and due also to the angle of mounting, as determined from maximum engine speed, the blade continuously adjusts its position in the housing to maintain minimum clearance as it rides on a thin film of oil.

## Piggy-Back Reefers Use Dry Ice

**T**WO NEW REFRIGERATED containers for Piggy-Back service have recently been introduced. Both use dry ice and circulating air to keep the cargo within a constant temperature range.

Foster-Built Bunkers, Inc., Chicago, has developed a container for use on a specially adapted railroad car built by North American Car Corp. Each rail car carries four bunkers.

Rail cars and flatbed trucks used in the system have a locking device which was developed by Clark Equipment Co. Bunkers may be transferred between truck and rail



car by one man operating a fork lift truck, as shown in the accompanying illustration.

### Plastic and Balsa Box

Rock Island Lines has a refrigerated "Convert-A-Frate" unit made of reinforced plastic, manufactured by Minnesota Mining & Mfg. Co. Designed primarily to carry meat, it can carry 14,000 lb suspended from its ceiling.

The single-section panel sides and roof of the 17 x 8 x 8-ft unit are made of 5¼-in. flat-grain balsa cores faced with ¼-in. Type 1002 isotropic "Scotchply" reinforced plastic skins. The floor is a 2¼-in. flat-grain balsa core surfaced on the top with plywood and ¼-in. isotropic Type 1002 "Scotchply" reinforced plastic, and on the bottom with ¼-in. of the same type plastic.

### Chicago Snow Control

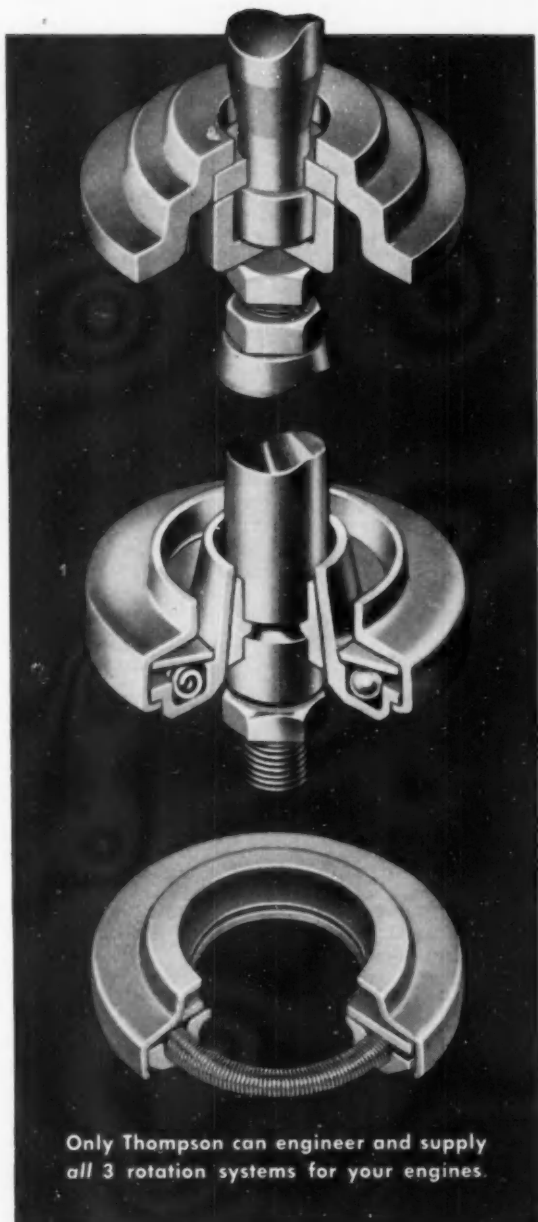


Bureau of Equipment Service, Department of Streets and Sanitation, City of Chicago, uses Gledhill snow plows on its refuse collection trucks. Some are direct hydraulic type, others air operated. Reversible straight blade plow is used to plow toward center strip or to opposite curb on one-way streets.



# Three Types of Valve Rotation

## All Thompson developed



Only Thompson can engineer and supply  
all 3 rotation systems for your engines.

Pick the Thompson valve-rotation system that  
best meets your engine service requirements:

### ROTOVALVE

or "free" rotation. Used where normal  
engine duty is not severe enough to require  
positive-powered rotation—

*✓ Thompson  
Developed*

### ROTOCAP

for proved positive rotation in measured  
stages where severest engine-service con-  
ditions are encountered—

*✓ Thompson  
Developed*

### ROTOCOIL

the latest Thompson rotation development  
that provides measured, positive valve  
rotation at unit cost competitive with any  
other rotation system—

*✓ Thompson  
Developed*

Only Thompson can engineer and supply *all three*  
rotation systems for your engines. The detailed story  
of valve rotation is featured in Thompson Products'  
Engineering Bulletin, Vol. 1, No. 3.



**Valve Division Thompson Products, Inc.**

1455 EAST 185th STREET • CLEVELAND 10, OHIO



# January News Roundup

## Highway Building Progresses

As of the middle of last month some 33,313 miles and some \$4 billion of highways were under construction or just about ready to go under the federal-aid highway program. It surpasses any previous record in the history of the Bureau of Public Roads, says Federal Highway Administrator John A. Volpe.

## But It Costs More

Some idea of the increased costs needed to build the wider and better designed roads for today's traffic comes from a recent BPR report. Highway construction contracts under the federal-aid program for the first 10 months of 1956 reached \$1420 million, covered 23,788 miles of highway. For the same period in 1955, the contracts awarded covered 24,334 miles of highway at a cost of \$1057 million.

## Road Mileage

How many miles of road are there in the United States? The chart at right gives the answer as detailed by the Bureau of Public Roads. Interesting note is that about one-third of the mileage is classified as non-surfaced.

## Air-Bus Express

A joint air and bus shipping service, designed to speed movement of packages to more than 6,000 communities which do not have direct air freight service, has been announced. The system has been worked out by the Greyhound Corp. working with 16 scheduled airlines and two air freight forwarders—Allegheny Airlines, American Airlines, Bonanza Air Lines, Capital Airlines, Continental Air Lines, Eastern Air Lines, The Flying Tiger Line, National Airlines, Northwest Airlines, Piedmont Aviation, Riddle Airlines, Slick Airways, Trans-

Texas Airways, Trans World Airlines, United Air Lines, Western Air Lines, Emery Air Freight Corp. and Wings & Wheels, Inc.

## Service Training

Shop techniques in engine rebuilding and brake service will be featured in one-week training periods during 1957 by Van Norman Automotive Equipment Co., Springfield, Mass. A staff of service engineers will conduct the intensive schooling project and instruct in all phases of practical machine shop operation. There will be no charge to fleet shop personnel for the training courses. Only transportation to and from the factory and lodging while in Springfield must be arranged. Classes are being scheduled for April 15-20, May 13-18, Sept. 16-21, and Oct. 14-19. Reservations for attendance are being accepted by all local Van Norman divisions and district managers or can be made by writing direct to Van Norman Automotive Equipment Co. Training Center, Springfield 7, Mass.

## New OTA Manager

Robert R. Knipe has been named manager of the Oregon Trucking Assns. Knipe, who had been assistant OTA manager since 1954, succeeds

George Flagg who retired at the end of last year.

## Carter Retires

N. A. Carter Sr., Vice President, Fruehauf Trailer Co. retired Jan. 1, 1957, from active business. He will continue to serve the Company as a consultant. Mr. Carter, regarded as one of the pioneers in highway transportation, in 1924 founded the Carter Mfg. Co. in Memphis, Tenn. to build truck-trailers of various types. In 1947, it became a part of the Fruehauf Trailer Co. and Mr. Carter was named manager of the Memphis plant. He was one of the organizers and long-time director of the Tennessee Motor Transport Assn. He was its president in 1948. Mr. Carter was also one of the organizers of the Mississippi Transport Assn. and the Arkansas Truck and Bus Assn. and has served on the board of directors of these associations.

## Safety Men Certificated

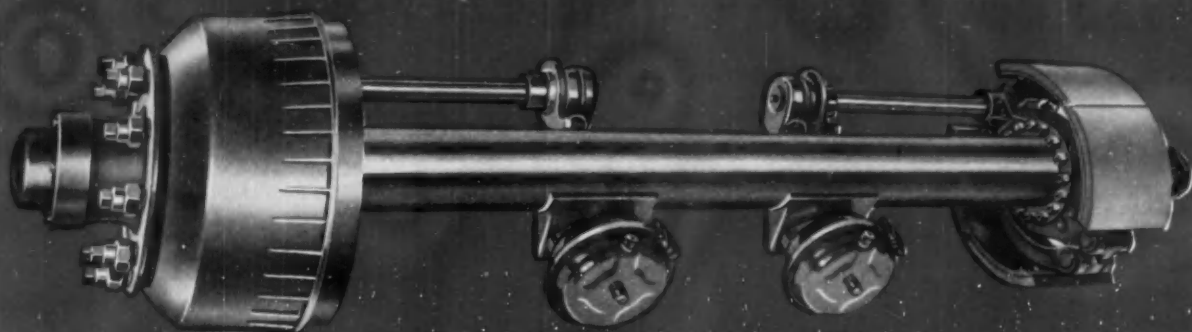
Twenty-one safety directors, one trainer of commercial drivers, and seven safety supervisors have been certified by the Certification committee of the National Committee for Motor (TURN TO PAGE 170, PLEASE)

## United States Road Mileage

Latest available data as reported by the Bureau of Public Roads, November, 1956

In 1000 of Miles	Non-Surfaced <sup>1</sup>	Surfaced			Total	Total
		Low Type <sup>2</sup>	Intermediate Type <sup>3</sup>	High Type <sup>4</sup>		
<b>Inter-city-Rural</b>						
State control						
Primary systems	6	37	133	211	381	387
Secondary systems	7	28	39	17	84	91
County roads <sup>5</sup>	28	57	38	10	103	131
Other <sup>6</sup>	5	2	1	2	5	10
<b>Total</b>	<b>46</b>	<b>124</b>	<b>209</b>	<b>240</b>	<b>573</b>	<b>619</b>
<b>Local control</b>						
County roads	748	778	174	40	992	1738
Town and township	213	275	53	21	349	562
Other	28	4	1		5	33
<b>Total</b>	<b>987</b>	<b>1057</b>	<b>228</b>	<b>61</b>	<b>1346</b>	<b>2333</b>
<b>Federal control<sup>6</sup></b>	<b>70</b>	<b>20</b>	<b>2</b>	<b>1</b>	<b>23</b>	<b>93</b>
<b>Total Inter-city-Rural</b>	<b>1103</b>	<b>1201</b>	<b>439</b>	<b>302</b>	<b>1942</b>	<b>3045</b>
<b>City-Municipal</b>						
State control						
Highway extensions		1	9	32	42	42
Local control						
City	42	75	105	109	289	331
<b>Total City-Municipal</b>	<b>42</b>	<b>76</b>	<b>114</b>	<b>141</b>	<b>331</b>	<b>373</b>
<b>Total</b>	<b>1145</b>	<b>1277</b>	<b>553</b>	<b>443</b>	<b>2273</b>	<b>3418</b>

<sup>1</sup>—Primitive, unimproved, and graded and drained roads. <sup>2</sup>—Slag, stabilized soil, and gravel or stone surfaces. <sup>3</sup>—Bituminous treated and mixed bituminous surfaces. <sup>4</sup>—Bituminous penetration, bituminous concrete, sheet asphalt, Portland cement concrete, brick, and block surfaces. <sup>5</sup>—County roads are under state control in Ala. (six counties), Del., N. C., Va. (all but two counties) and W. Va. <sup>6</sup>—Park, forest, reservation and other roads not otherwise included.



# SHULER'S NEW T18C AXLE

is **LIGHTER** Than Ever,  
**STRONGER** Than Ever

Shuler axles, with their one-piece forged design, have led the "weight-strength" parade for years.

Now Shuler offers T18C series axles with *new forged steel hubs and new lightweight drums*. They give you the greatest possible weight saving with maximum strength. The new hubs weigh less than magnesium or aluminum hubs—over 70 pounds saving in weight at no extra cost over ordinary malleable iron hubs! And remember—Shuler axle centers are "one piece"—made of controlled analysis premium steel, forged and heat treated throughout to insure even toughness *all over*, to eliminate every possibility of failure due to uneven metal structure.

Want more facts? Write us for complete information. You'll discover why more and more automotive equipment manufacturers are specifying Shuler One-Piece Tubular Axles.

## NEW MODELS INCLUDE:

- 1 New lightweight but permanent malleable brake shoes and removable spiders.
- 2 Roller Shafts are fitted into the shoes with precision-machining, to insure full bearing, and are then locked in place. *They can't fall out.*
- 3 Positive locking "roll pins" in the anchor pins.
- 4 Parkerized and hardened cam rollers for rust-proofing and long service.
- 5 Nylon liner and outer cam-shaft bushings.
- 6 Self-aligning "ball and socket" aluminum cam-shaft housing.
- 7 One piece forged and heat treated cams, precision ground and uniformly hardened at wearing surfaces.



## NEW DRUM REDESIGNED FOR MORE STRENGTH, LESS WEIGHT

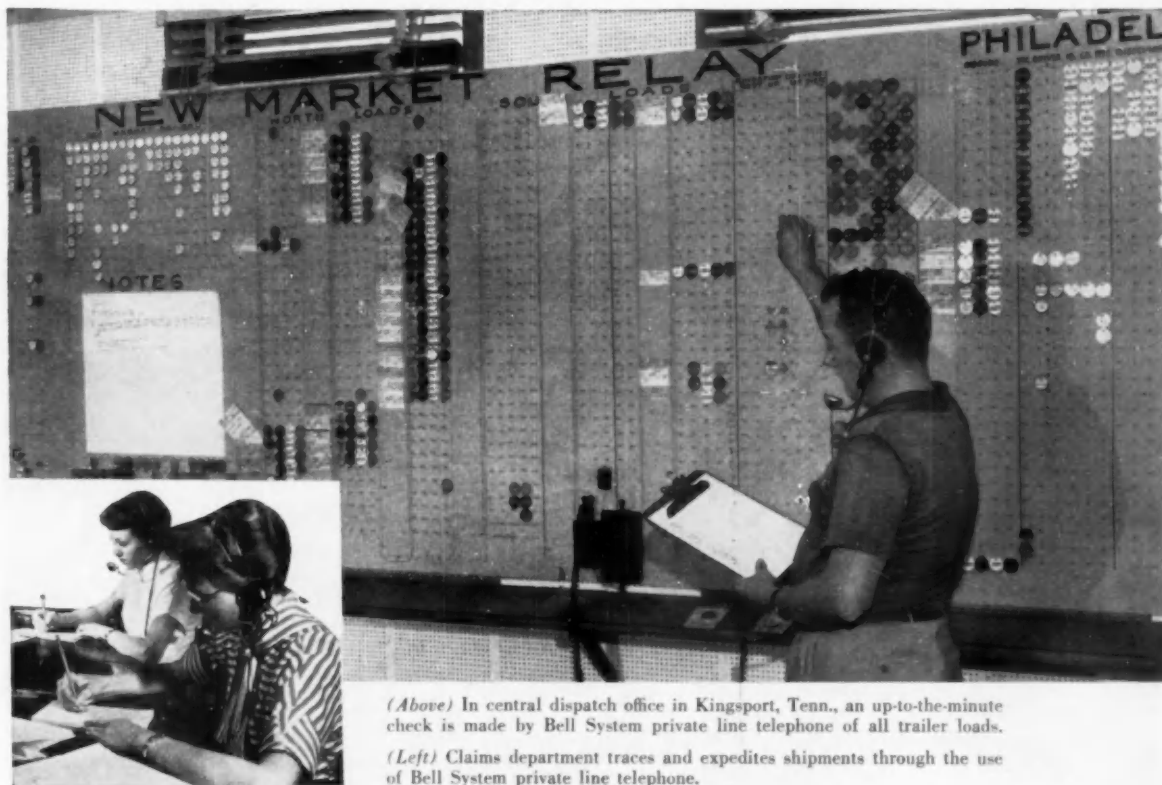
Notice those "battresses" that encircle the perimeter of the new Shuler drum. They're the secret of its light weight and maximum strength. Unneeded, dead-weight metal has been eliminated—but *where strength is needed, the drum has actually been "beefed up"*. Engineering like this, and one piece forged axle design, make Shuler axle assemblies lighter than competitive makes. And Shuler maintains this lighter weight with top quality brakes, genuine malleable iron brake shoes, and greater area replaceable brake linings!

SHULER AXLE COMPANY, Incorporated, LOUISVILLE, KENTUCKY  
SUBSIDIARY OF FULLER MANUFACTURING COMPANY

SALES OFFICES in DETROIT, CHICAGO, OAKLAND and FORT WORTH  
WEST COAST WAREHOUSE  
Oakland, California  
SOUTHWEST WAREHOUSE  
Fort Worth, Texas

# 1956 New Truck Registrations by Makes by States

STATE AND MONTH	Brookway	Chevrolet	Diamond T	Dodge	Ford	G.M.C.	International	Mack	Ree	Studebaker	White	Willis Jeep	Willis Truck	All Others	Totals	
Alabama	Oct. 945			108	371	157	124	31	5	7	20		5	9	1,480	
10 Mos.	5,431	18	743	3,982	1,758	1,384	185	17	63	160	45	61	64	13,871		
Arizona	Oct. 281	4	45	187	92	61	2	6	5	11	17	16	13	740		
10 Mos.	2,418	17	442	1,749	785	516	34	18	95	56	79	151	113	6,591		
Arkansas	Oct. 560		57	434	123	110								1,216		
10 Mos.	5,599	34	606	4,404	1,462	1,578	51	171	79	63	44	10	14,169			
California	Oct. 3,669	40	439	2,612	562	828	20	40	55	56	93	134	301	8,853		
10 Mos.	2	26,739	318	5,318	24,782	7,087	5,710	328	272	779	679	895	1,278	2,417	78,902	
Colorado	Oct. 332	7	56	257	87	119	7	2	6	3	33	48	10	868		
10 Mos.	3,534	42	585	2,632	885	1,041	86	19	103	84	295	408	103	9,819		
Connecticut	Oct. 4	230	10	49	240	80	122	31	7	4	30	19	26	804		
10 Mos.	18	2,230	91	582	1,698	717	1,214	270	63	98	291	127	184	7,873		
Delaware	Oct. 1	73	6	42	18	41								220		
10 Mos.	1	744	13	182	554	254	381	94		16	46	33	20	2,343		
District of Columbia	Oct. 70	1	12	64	15	25				4	1	2	7	215		
10 Mos.	617	3	180	582	223	311	41	24	8	72	0	40	57	2,144		
Florida	Oct. 725	10	114	938	238	305	100	21	24	57	56	53	58	2,696		
10 Mos.	1	7,411	78	1,181	7,445	2,049	2,187	538	190	248	439	319	525	346	22,843	
Georgia	Oct. 614	12	114	745	177	185	20	3	9	10	32	10	14	1,832		
10 Mos.	2	7,468	68	1,216	8,064	2,328	2,149	285	28	197	321	120	142	63	22,428	
Idaho	Oct. 187	4	39	168	59	77				15	1	10	34	558		
10 Mos.	1,617	7	419	1,327	594	746	37	1	146	39	196	253	43	5,322		
Illinois	Oct. 787	45	139	885	222	450	19	4	18	79	21	23	28	2,724		
10 Mos.	9,968	390	1,799	9,334	2,786	8,120	284	84	322	574	192	194	387	31,384		
Indiana	Oct. 617	13	145	635	121	136	49	11	17	55	10	13	95	2,071		
10 Mos.	7,202	156	1,340	6,196	1,807	3,726	307	101	473	868	93	144	258	22,473		
Iowa	Oct. 256	10	37	305	54	159				12	2	5	15	867		
10 Mos.	3,780	103	589	3,584	704	2,281	28	12	111	83	22	41	177	11,441		
Kansas	Oct. 344	1	48	378	83	155	3	6	10	8	4	13	13	1,065		
10 Mos.	4,219	22	506	3,905	973	1,088	19	36	132	101	34	123	57	11,813		
Kentucky	Oct. 434	9	127	408	124	133	8	3	15	5	14	8	5	1,293		
10 Mos.	4,510	35	789	3,890	1,405	1,461	85	24	115	119	141	158	48	12,546		
Louisiana	Oct. 784	4	68	715	144	137	9	2	17	17	17	11	38	17,872		
10 Mos.	7,019	54	815	8,873	1,665	1,823	144	24	124	144	8	15	28	6	22,525	
Maine	Oct. 28	6	379	1,436	659	905	69	3	81	55	104	192	96	8,272		
10 Mos.	1,461	6	73	305	71	180	18	5	3	30	3	9	1	1,073		
Maryland	Oct. 389	16	870	2,089	636	1,280	288	67	63	182	49	80	86	9,827		
10 Mos.	12	3,019	17	109	476	97	155	49	8	72	22	37	35	1,372		
Massachusetts	Oct. 4	288	17	109	476	97	155	49	8	72	22	37	35	1,372		
10 Mos.	54	3,406	122	1,288	4,354	1,407	1,944	511	96	95	163	324	346	14,886		
Michigan	Oct. 791	23	307	851	248	248	16	10	28	41	24	36	2	2,656		
10 Mos.	9,584	196	2,716	9,510	2,786	2,258	282	144	202	410	290	290	383	28,015		
Minnesota	Oct. 579	8	72	359	99	183	10	10	11	29	12	14	40	1,124		
10 Mos.	4,433	71	800	4,675	1,247	2,296	112	48	188	122	88	179	221	14,478		
Mississippi	Oct. 558		38	394	138	220	7		10	5	9	4	1	1,394		
10 Mos.	5,281	5	634	4,240	1,386	1,633	57	2	144	32	66	43	11	13,416		
Missouri	Oct. 642	25	79	500	187	294	10	10	6	24	10	10	10	1,810		
10 Mos.	7,616	78	1,020	5,738	2,012	2,834	79	47	168	391	88	72	119	20,081		
Montana	Oct. 159	2	47	148	61	77			3	2	4	24	38	694		
10 Mos.	1,238	2	351	1,688	623	1,091	57	17	101	43	151	236	79	6,308		
Nebraska	Oct. 270	11	20	250	38	138	5		5	11	7	11	17	781		
10 Mos.	2,282	79	304	2,085	581	1,373	11	27	79	124	85	84	84	7,158		
Nevada	Oct. 43		7	15	3	8				1	1	2	4	89		
10 Mos.	748	5	255	563	412	215	24		81	2	43	121	59	2,828		
New Hampshire	Oct. 1	59	1	77	17	40	15		1	17	30			3,307		
10 Mos.	3	834	3	241	318	456	183	10	52	84	119	200	69	1,794		
New Jersey	Oct. 482	21	176	496	142	189	95	11	10	58	28	35	47	10,994		
10 Mos.	143	5,289	170	1,832	5,259	1,637	2,274	643	67	134	585	152	252	377	8,881	
New Mexico	Oct. 461	1	35	198	79	60	14	6	2	3	6	12	4	6,530		
10 Mos.	2,824	11	323	1,798	831	553	109	15	54	92	154	44	78	5,060		
New York	Oct. 26	1,149	27	427	1,433	453	781	182	48	21	111	84	176	4,286		
10 Mos.	391	10,774	174	3,752	11,392	3,971	6,194	1,453	368	275	43	17	16	2,374		
North Carolina	Oct. 984	3	87	678	217	350	28	239	319	120	132	63	10,989			
10 Mos.	120	140	1,036	6,235	1,603	1,871	500	28	4	1	6	9	2	433		
North Dakota	Oct. 129		32	130	24	105								4,243		
10 Mos.	1,259		266	1,223	321	1,024			5	46	8	29	51	3,068		
Ohio	Oct. 797	18	188	1,048	262	483	47	21	13	80	28	48	95	3,068		
10 Mos.	1	10,095	192	2,410	10,436	2,652	4,790	525	176	299	588	424	412	14,422		
Oklahoma	Oct. 504		77	405	101	191			9	10	10	49	78	14,225		
10 Mos.	5,998	11	856	4,481	1,212	1,692	90	39	111	158	46	49	60	1,300		
Oregon	Oct. 382	2	64	285	135	194	5	17	16	29	25	60	42	13,068		
10 Mos.	3,877	73	801	3,310	1,561	1,634	164	45	292	380	215	565	480	13,850		
Pennsylvania	Oct. 12	960	18	299	1,107	278	482	117	18	40	101	68	97	3,850		
10 Mos.	106	10,437	220	3,245	10,282	3,215	5,312	1,191	157	429	1,138	448	952	37,818		
Rhode Island	Oct. 278	4	8	96	16	31	12	2	4	3	3	5	7	471		
10 Mos.	828	27	210	697	225	342	80	17	24	36	25	45	54	2,610		
South Carolina	Oct. 352		22	168	45	32	10	1	3	2	1	1	1	667		
10 Mos.	3,490	8	471	2,841	718	702	177	5	71	99	31	28	20	8,667		
South Dakota	Oct. 118	4	23	101	39	113								413		
10 Mos.	1,183	19	203	1,092	389	1,038	2	11	35	7	72	89	55	4,195		
Tennessee	Oct. 382	2	58	345	165	205	16	5	4	19	9	7	4	1,222		
10 Mos.	5,040	34	960	4,234	1,606	1,859	239	37	87	453	90	83	26	14,550		
Texas	Oct. 2,319	19	182	1,634	355	622	82	14	18	100	33	29	21	5,824		
10 Mos.	24,964	247	2,130	18,439	4,366	6,247	668	79	417	1,133	311	300	201	68,496		
Utah	Oct. 117	2	36	98	43	60	5		4	5	14	30	21	425		
10 Mos.	1,387	29	383	1,072	488	542	49	17	55	66	78	139	123	4,367		
Vermont	Oct. 1	55	5	72	27	46	5		3	1	10	20	10	267		
10 Mos.	20	678	5	182	721	322	465	51	3	47	8	146	186	44	2,859	
Virginia	Oct. 550	9	85	440	187	232	37	10	15	42	21	38	10	1,676		
10 Mos.	2	5,296	21	1,083	4,856	1,378	1,737	456	82	183	299	170	233	68	15,884	
Washington	Oct. 764	4	61	277	134	136			11	11	46	46	46	1,823		
10 Mos.	4,131	40	1,089	3,777	1,549	1,869	167	43	144	118	148	370	335	13,498		
West Virginia	Oct. 213		58	255	88	70	3	4	8	24	40	16	781			
10 Mos.	2,338	3	612	2,475	846	856	51	25	101	113	266	333	88	8,677		
Wisconsin	Oct. 409	8	71	397	104	237	18	6	7	8	13	21	27	1,323		
10 Mos.	4,151	48	909	4,117	1,185	2,520	172	43	130	131	98	169	162	13,826		
Wyoming	Oct. 65		16	81	38	47	3		1	1	13	28	1	315		
10 Mos.	1,075	5	182	947	386	498	16		36	27	93					



(Above) In central dispatch office in Kingsport, Tenn., an up-to-the-minute check is made by Bell System private line telephone of all trailer loads.

(Left) Claims department traces and expedites shipments through the use of Bell System private line telephone.

## How Bell System private line telephone serves The Mason and Dixon Lines, Inc.

The Mason and Dixon Lines, Inc., operating between Atlanta and New York, daily depends on Bell System private line telephone in its high-speed, high-efficiency operation.

**Dispatching:** For example, a recent shipment left Kingsport, Tennessee, for New York. While it was en route, the shipper changed the destination to Philadelphia. Through the use of Bell System private line telephone facilities, the shipment

was rerouted and arrived in Philadelphia the next day.

**Claims:** A report is made by private line telephone of daily floor checks at each terminal. This has made possible prompt settlement on damaged freight and immediate dispatch of misrouted shipments to their destination.

Other phases of The Mason and Dixon Lines operation which have been improved by the use of private

line telephone include customer relations, sales, cost control, maintenance, accounting, traffic.

\* \* \*

*A survey of your communications may reveal ways in which your firm can save time and money. A Bell System communications engineer will be glad to work with you. Call your Bell Telephone business office.*

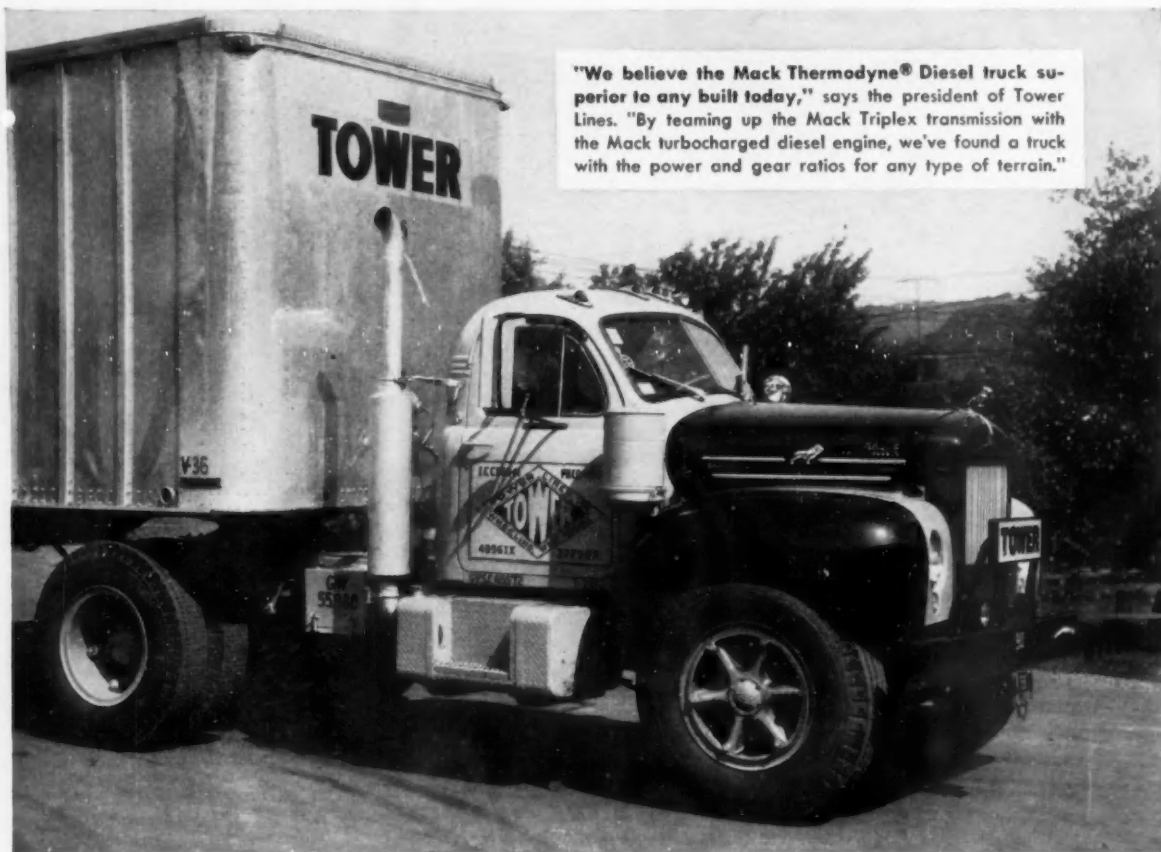


### Bell Telephone System

PRIVATE LINE TELEPHONE • PRIVATE LINE TELETYPEWRITER

CHANNELS FOR: DATA TRANSMISSION • TELEMETERING • REMOTE CONTROL • TELEPHOTOGRAPH • CLOSED CIRCUIT TV





"We believe the Mack Thermodyne® Diesel truck superior to any built today," says the president of Tower Lines. "By teaming up the Mack Triplex transmission with the Mack turbocharged diesel engine, we've found a truck with the power and gear ratios for any type of terrain."

## mountainous roads . . . heavy loads . . . yet Tower Lines reports 7½ to 8 miles per gallon with MACK diesels

"... and that's only half the story," says Mr. Bailey Hupp, president of Tower Lines, Inc., Wheeling, West Virginia. "We've operated Macks since 1937, comparing them with other makes we've temporarily acquired in mergers. We've inevitably found that Mack maintenance costs are lower and that Mack performance is higher, leading us to use Macks exclusively—90 units right now."

Tower Lines maintains grueling, on-time schedules through the mountainous country of the Virginias, Carolinas, Tennessee and Georgia. Its new Mack B-61T's and B-613T's are not only running up record fuel and maintenance economies, but make a big hit with drivers as well. "They tell us that the comfort of the Mack cab, coupled with ease of handling,

makes for ideal driving," Mr. Hupp reports.

"From our experience," Mr. Hupp continues, "we can recommend Macks to anyone interested in dependability, long life and better all-around profitable performance in both local and long distance hauling."

Why put up with inferior performance? Your Mack representative will be glad to help put you on the road to bigger earnings right now. Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

**MACK**  
**first name for**  
**TRUCKS**

4557

**year after year . . . MACK diesel trucks outsell all others**



# CCJ's Truck Specifications

COMPILED FROM DATA SUPPLIED BY MANUFACTURERS

## KEY TO DEFINITIONS

### MAKE AND MODEL

Only Domestic Truck Models are listed.

### OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

### CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

### RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are

those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors including grades, road conditions, etc., the gross weight that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

### CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the

weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

### STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

### MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

### MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

### MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

### MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

### GEAR RATIO RANGE

Gear Ratio Range in High—Ratio within the range given are available at no extra cost. Exceptions are noted.

### TRACTORS

Unless given the designation (N)—meshing not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

## KEY TO ABBREVIATIONS

### MAKES—ALL

B—Bendix.  
BL—Brown-Link.  
BU or BU—Buda.  
BW—Bendix-Westinghouse.  
C—Chevrolet.  
CI or CI—Clark.  
Co—Continental.  
Cu or Cum—Cummins-Diesel.  
E—Eaton.  
F—Ford.  
Fu—Fuller.  
G—Goodyear-Hawley type.  
H—Hottel.  
Her—Hercules.  
HS—Hall-Scott.  
Int—International Harvester.  
L—Lockheed.  
LeR—LeRoi.  
LW—Lockheed front, Wagner "hi-Tork" rear.  
LT—Lockheed type front, Timken rear.  
LW—Lockheed front, Wisconsin rear.  
M—Midland.  
N.P.—New Process.  
O or Ow—Own.  
Op or Opt—Optional.  
Shu—Shuler.  
Spi—Speer.  
T or Tim—Timken-Detroit Axle Co.

TW—Timken-Detroit—Westinghouse.  
TW—Timken-Detroit—Wisconsin.  
Var—Variable.  
WG—Wagner Gear.  
Wau—Waukegan.  
W or Wis—Wisconsin.  
WE—Wagner Electric.  
Wg—Wagner "hi-Tork".  
Ww—Westinghouse.  
WW—Westinghouse or Wagner

**WHEELS DRIVEN**  
2F—Forward unit of Rear Axle Group.  
2R—Rear Unit of Rear Axle Group.  
4R—Forward and rear units of Rear Axle Group.  
6—All wheels.

**BRAKES—SERVICE**  
Location  
4—Four Wheels, front and rear.  
4r—Four Wheels, rear only.

**Type**  
I—Internal.  
X—External.  
**Operation**  
A—Air.  
H—Hydraulic.

V—Vacuum.  
D or Dp—Dual Primary.

### BRAKES—HAND

Location  
C—Center of double propeller shaft.  
2—Rear wheels.  
4—Four wheels.  
6—Six wheels.  
P—Back of Power Divider.  
J—Jackshaft.  
T—Transmission.  
D—Driveshaft.

**Type**  
D—Tru-Stop disk.  
I—Internal.  
M—Mechanical.  
X—External.  
PD—Two drums on rear of power divider.  
F—Mechanical, foot operated

**BRAKE DRUMS**  
Material  
a—Cast alloy iron.  
A—American Cast Foundry.  
c—Cast iron.  
C—Centrifugal cast.  
Co—Composite Front, Cast iron in rear.  
Co—Centrifuse.

CI—Copper iron.  
Co—Composite.  
CX—Front, centrifugal cast; rear, composite.  
D—Dayton.  
E—Ermaline.  
G—Gunita.  
N—Nickel iron.  
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

### FRAME

Type  
C—Channel.  
T—Channel tapered front and rear.  
L—Channel reinforced with liner.  
B—Channel reinforced with both liner and diaphragm.  
P—Channel reinforced with plate.  
TL—Channel tapered front and rear reinforced with liner.  
D—Drop Center.  
Tf—Tapered front.  
A—Straight section side members, lined with oak inserts.

Z—Reinforced (X) member frame, box type sections.  
BQ—Box trailer.  
H—Heat treated.

### REAR AXLE

Final Drive and Type  
R—Ravel.  
CD—Chain Drive.  
F—Full-floating.  
H or Hy—Hypoid.  
d—Dual range axle.  
2—Double Reduction.  
S—Spiral bevel.  
W—Worm.  
3/4—Three Quarters Floating.  
S—Semi-floating.  
T—Torque Tube.

### GEAR RATIOS

(\*\*\*) Only one ratio.  
**Drive and Torque**  
M—Hottel (springs).  
R—Radius Rods.  
L—Parallel Torque Rods.  
T—Torque Arm.

### GOVERNOR STANDARD

V—Yes.  
N—No.

## KEY TO REFERENCES

c.f.—Cab Forward design.  
c.o.e.—Cab-Over-Engine design.  
l.c.f.—Low cab forward design.  
(D)—Diesel engine equipped.  
(T)—Designed for tractor use only.  
(C)—Ford or Chevrolet Models.  
(R)—Remanufactured Fords.  
•—Denotes "Includes Cab" when used with weights or prices.

### AVAILABLE

•—Conventional or C.O.E. available.  
†—Air brakes available.  
††—Two or three speed auxiliary transmission available.  
Δ—Two speed rear axle available.

### CHEVROLET

•—Includes spare wheel, full fuel tank and cooling system.  
†—Tridemaster V-8 engine available.  
Δ—Taskmaster V-8 engine available.  
••—5-speed transmission available.  
•••—Powermatic available.  
••••—Front, 2.30 x .702; rear, 2.30 x 1.16.  
•—Overdrive optional.  
††—Theoretical I.D. (journal diameter plus clearance) front, 2.6856; front center, 2.7166; rear center, 2.7478; rear, 2.7788. Total effective length (overall length minus chamfers) 4.127.  
Δ—7.17 5 I.D. optional.  
†—7.17 8 1/2 available.  
††—488 sq. in. lining area used with 7.17 8 1/2 axle.  
†††—Front, 2.69x1.06; rear, 2.78x1.19.  
••—Front, 2.30 x .78; rear, 2.30 x .98.

†—Synchro-mesh 3-speed H.D. optional.  
††—4-speed synchro-mesh transmission optional.  
Δ—Two speed rear axle available.  
•—4 1/2 brake optional.  
Δ—Hydramatic available.  
††—4.11 available with optional overdrive.  
•††—Air over hydraulic brakes available.  
•—715 sq. in. drum area with optional 7.17 8 1/2 axle.  
•††—4.11 available with optional overdrive; 3.36 available with optional automatic transmission.  
††—6.17 available.  
••—Speer H.D. 5-speed transmission available.  
††—V-8, Turbo-Fire 265 or Turbo-Fire 283 engines available.  
†—Powerglide or Turboglide optional.  
††—V-8 Super Taskmaster 283 optional.  
•—V-8 Super Loadmaster 322 optional.  
••—Frame reinforcements 8 1/2 x 3 1/2 x 4 1/2.  
††—Includes full fuel tank and cooling system.  
†††—Includes spare tire, full fuel tank and cooling system.

### COLEMAN

•—11.00 22 also available.  
••—FuSA65 or Spicer 6352 also available.  
†—Cum HBB600 also available with horsepower of 165-1800.

### DODGE

•—18000 with 217 in. wheelbase.  
Δ—371 with two-speed axle.

### DUPLEX

†—Torque Divider, Timken 770-2 speed.

### FABCO

††—see same footnote under Chevrolet.  
•—With 2-speed transfer case.  
RC—Chevrolet axle remanufactured.  
RF—Ford axle remanufactured.

### FEDERAL

•—Also available with tandem rear axle.

### FORD

Δ—Courier 176-hp engine with Fordomatic.  
††—F-350, 9800 lbs. G.V.W. with dual wheels.  
•—F-600, C-600, B-600, 158-hp, and 168-hp (governed) H.D. Power King engines also available.  
Δ—F-700, C-700, B-700, 168-hp Power King engine also available.  
•—T-700, 302 cubic inch Cargo King engine also available.  
††—F-750, C-750, B-750, 196-hp Cargo King engine also available.  
•—F-800, C-800, B-800, C-900, 212-hp Torque King engine also available.  
••—F-700, F-750, B-750, C-700, C-750, only one ratio available.  
†—B-500 School Bus (cowl to axle dimension).  
Δ—B-600 School Bus (cowl to axle dimension) 194 in. for 220 in. wheelbase.

†—P-350 Parcel Delivery (cowl to axle dimension) 106 in. for 122 in. wheelbase.

††—F-500, 7 1/2 in. x 2 1/2 in. x 1 1/2 in. frame standard on 130 in. wheelbase; 9 1/2 in. x 2 1/2 in. x 1 1/2 in. frame standard on 154 in. wheelbase.

### FWD

†—Transport tractors with one man cab be-ride the engine.  
Δ—23 PT rear axle is a driving axle plus a trailing axle.  
•—Model available in c.o.e.

### KENWORTH

††—Timken TK-500 PA Trail-Axle.  
††—14.00 24, front; 16.00 24, rear.  
†—Optional transmission.  
•—C.O.E. optional.  
•—One man cab.  
Δ—Torque converter plus Torquematic transmission optional.  
•—Cab beside engine optional.  
††—Both C.O.E. and cab beside engine optional.  
††—14.00 24 front; 18.00 25 rear.  
••—Cummins NHRRSD 600.  
††—Allison TCI 654 plus TG 607.  
•—1114.  
Δ—1108.

### OSHKOSH

Δ—Includes cab.  
•—1091 cu. in.  
••—Hydraulic coupling optional.  
Δ—Dependent upon engine.

### REO

Δ—Model 331-0A and 331-0A LPG engines can be furnished.  
Δ—Two speed axle available.  
Δ—Five full outer channel, 9 1/2 x 3 1/2 x 1 1/2.  
†—Model 255-0A-LPG or 292-0A engine can be furnished.  
•—Front only; rear, 11 22 5.  
†—Front only; rear, 10 22 5.  
††—OH-170 or OH-160 LPG engine can be furnished.  
•—OH-160 LPG engine can be furnished.  
•—Model OV-235 or OV-220-LPG engine can be furnished.

### STUDEBAKER

•—Two speed 5.93-8.10 or 6.48-8.86 optional.  
•—Two speed 6.16-8.48 or 6.61-9.09 optional.

### TRUCKSTELL

††—With 3 speed power divider.  
Δ—Weight with cab and maximum tires.  
††—Including slip-over reinforcing frame channels.  
†—Air brake optional.

### WARD LA FRANCE

†—Available with optional rear axles.  
Δ—Available with 11 00 22 or 12 00 20 tires for G.V.W. of 60,000 lbs and optional front and rear axles.  
Δ—Auxiliary transmission, Fuller 3465, 3465, 3492 and 3492.

### WILLIS

•—Complete vehicle-Pick-up type body.  
†—Three speed transmission, 2 speed transfer case.

(Turn to Next Page, Please)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE	Gross Vehicle Weight	TIRE SIZES	ENGINE DETAILS	TRANSMISSION	REAR AXLE	FRONT AXLE	BRAKES	FRAME
1	Available										
2	Available										
3	Available										
4	Available										
5	Available										
6	Available										
7	Available										
8	Available										
9	Available										
10	(D)										
11	(D)										
12	Chevrolet	115	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
13	Chevrolet	115	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
14	Chevrolet	115	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
15	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
16	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
17	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
18	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
19	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
20	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
21	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
22	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
23	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
24	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
25	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
26	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
27	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
28	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
29	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
30	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
31	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
32	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
33	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
34	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
35	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
36	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
37	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
38	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
39	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
40	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
41	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
42	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
43	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
44	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
45	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
46	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
47	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
48	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
49	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
50	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
51	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
52	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
53	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
54	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
55	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
56	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
57	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
58	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
59	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
60	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
61	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
62	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
63	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
64	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
65	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
66	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
67	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
68	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
69	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
70	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
71	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
72	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
73	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
74	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
75	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
76	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
77	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
78	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
79	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				
80	(C.F.)	114	114	4100	132x567 50 148	7-50 148	O-HL Fl 140T				

For Key to References and Abbreviations See Page 95

(Turn to Page 98, Please)

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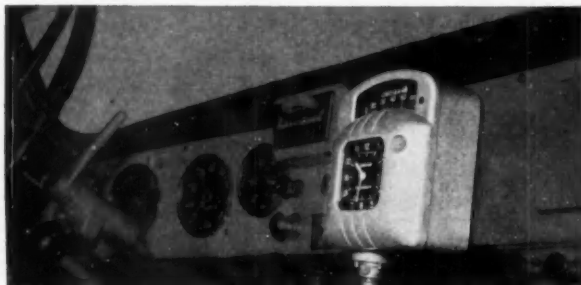
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(NUMBER)

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Continued from Page 98)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Maximum Standard	Gross Vehicle Weight (For Normal Service)	Chassis Weight (See definition)	TIRE SIZES			ENGINE DETAILS						TRANS-MISSION	REAR AXLE		FRONT AXLE	BRAKES				C-A Dimensions (Min., Std., W. B.)	Side Rail Dimensions	FRAME												
						Standard Front and (See definition)	Maximum Authorized (Dual rear steering rear less noted)	Dual rear steering rear less noted)	No. of Cylinders, Stroke and Displacement	Comp. Ratio	Torque lb. ft. (H.P., at 1,800 R.P.M.)	Max. Brake H.P.	Number of Gears	Governor Standard		Make and Model	Forward Speeds		Make and Model	Clear and Type	Drive & Torque	Clear Ratio (Range in High)				Make and Model	Lining Area	Drum Material	Hand Location								
																														Make and Model	Clear and Type	Drive & Torque	Clear Ratio (Range in High)	Make and Model	Lining Area	Drum Material	Hand Location
Ford Cont'd																																					
1	Ford Cab	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53	11 22.5	46275.10 22.53													
2	F-900	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53	12 22.5	46553.11 22.53													
3	T-700	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53	9 22.5	46308.22 53													
4	T-750	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53	10 22.5	46390.9 22.53													
5	T-800	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53	11 22.5	46390.10 22.53													
6	Cab (e. f.)	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53	8 22.5	46707.22 53													
7	C-600 (e. f.)	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53	9 22.5	48108.22 53													
8	Cab (e. f.)	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53	10 22.5	46608.22 53													
9	C-750 (e. f.)	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53	10 22.5	46940.9 22.53													
10	Cab (e. f.)	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53	11 22.5	46330.10 22.53													
11	H-500 School Bus	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53	12 22.5	46780.11 22.53													
12	H-500 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
13	H-500 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
14	H-500 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
15	H-500 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
16	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
17	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
18	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
19	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
20	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
21	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
22	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
23	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
24	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
25	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
26	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
27	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
28	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
29	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
30	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
31	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
32	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
33	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53													
34	H-750 School Bus	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53	7 22.5	46647.22 53</																					

For Key to References and Abbreviations See Page 95

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HEAVY HAULING



LIGHT LOADS



HILLY COUNTRY



OPEN ROAD



EASIER MANEUVERABILITY



EMPTY



HEAVY TRAFFIC



HEAVY LOADS



WINTER



SUMMER



FLAT LAND



MOUNTAINS

## The NEW Spicer *Dual-Purpose* 4-SPEED AUXILIARY TRANSMISSIONS

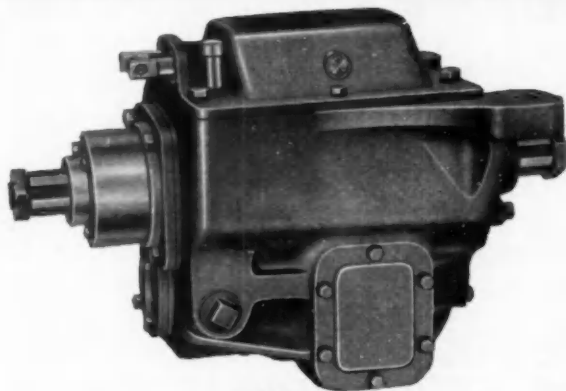
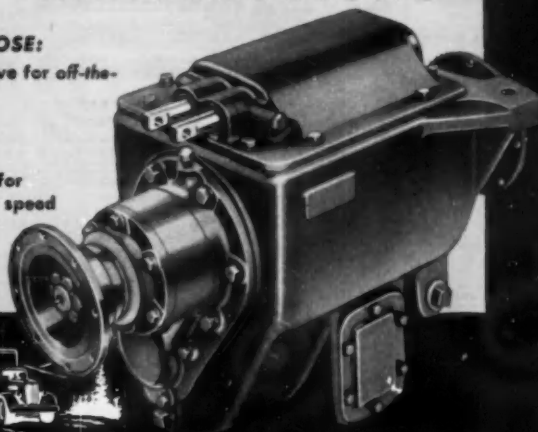


- DUAL-PURPOSE:**  
1. Deep under-drive for off-the-highway power



- PLUS**  
2. Splitter Ratios for on-the-highway speed

—IN THE SAME UNIT!



Here's another Spicer innovation in auxiliary transmission design for more efficient truck operation . . . a deep under-drive and splitter ratios in one gear box!

This means plenty of power for tough operating conditions when off-the-highway on any terrain.

And it means plenty of speed for fast on-the-highway operation!

Another important feature: these new Spicer 4-Speed Auxiliaries have exactly the same overall length as Spicer 3-Speed Auxiliaries. They can be installed in the same vehicle without change in companion flanges or drive-line length. And they have the same shift lever controls as the 3-speed units.

A top-mounted power take-off capable of transmitting full engine torque is available for use with the new Spicer 4-Speed Auxiliaries.

**SPICER PRODUCTS:** TRANSMISSIONS • UNIVERSAL JOINTS • PROPELLER SHAFTS • AXLES • TORQUE CONVERTERS • GEAR BOXES • POWER TAKE-OFFS • POWER TAKE-OFF JOINTS • RAIL CAR DRIVES • RAILWAY GENERATOR DRIVES • STAMPINGS • SPICER and AUBURN CLUTCHES • PARISH FRAMES • SPICER FRAMES

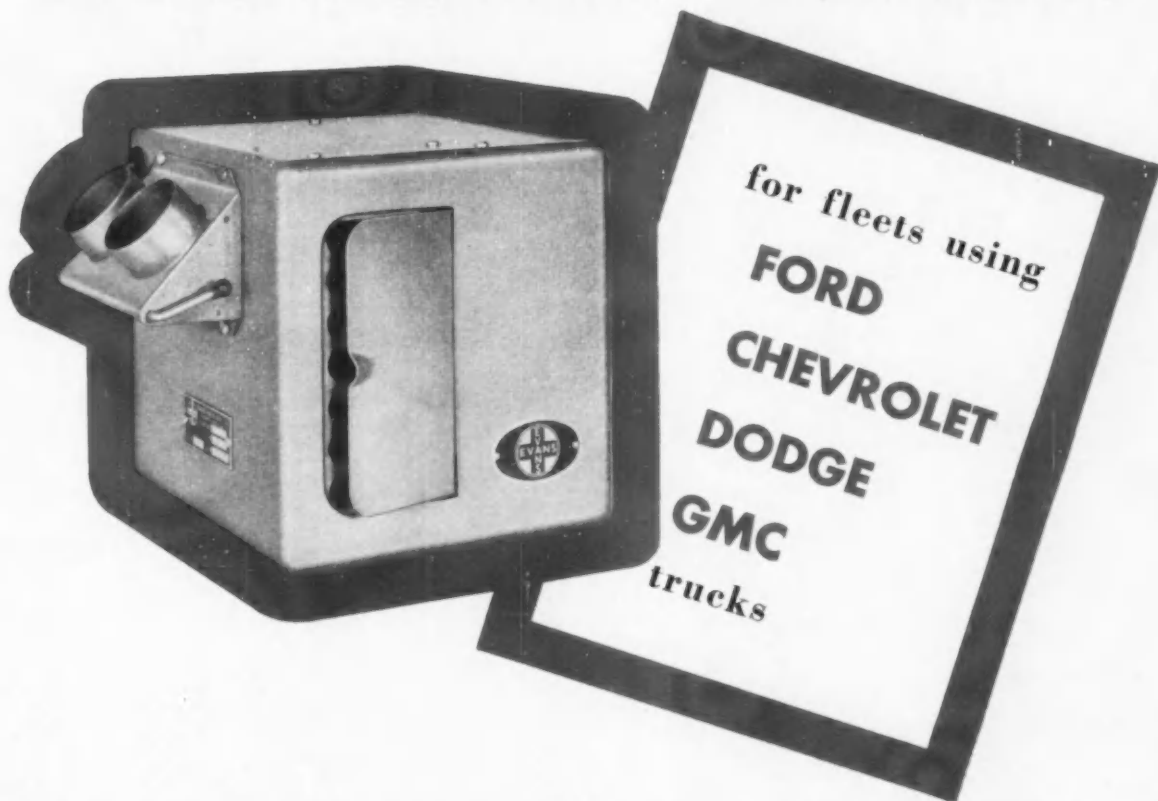
# DANA CORPORATION • TOLEDO 1, OHIO

Line Number	MAKE AND MODEL	WHEEL BASE	TIRE SIZES	CHASSIS LIST PRICE	ENGINE DETAILS				TRANSMISSION		REAR AXLE		FRONT AXLE	BRAKES		FRAME
					No. of Cylinders	Displacement	Comp. Ratio	Torque, lb.-ft.	H.P. at R.P.M.	Max. Brake H.P. at R.P.M.	Number and Length of Bars	Model	Make and Model	Model	Make and Model	
1	Reo-Cont'd.															
2	A-702	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
3	A-703	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
4	(e.o.e.) AC-703	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
5	(e.o.e.) AC-703	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
6	A-500-01	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
7	(Sch. Bus) F-201	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
8	(Sch. Bus) F-201	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
9	(Sch. Bus) F-201	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
10	(Sch. Bus) F-201	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
11	(Sch. Bus) F-201	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
12	(Sch. Bus) F-201	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
13	Studebaker	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
14	352	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
15	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
16	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
17	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
18	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
19	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
20	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
21	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
22	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
23	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
24	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
25	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
26	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
27	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
28	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
29	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
30	357	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
31	Ward La Fr.	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
32	D-1	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
33	D-1	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
34	D-1	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
35	(D)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
36	White-Freightliner	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
37	(e.o.e.) WF-42	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
38	Coleman	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
39	(D)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
40	Dodge	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
41	(e.o.e.) K-W-500	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
42	(e.o.e.) K-W-500	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
43	Pacero (e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
44	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
45	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
46	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
47	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
48	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
49	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
50	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
51	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
52	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
53	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
54	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
55	(e)	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
56	Federal	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
57	T-400R-1	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
58	T-400R-1	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
59	T-400R-1	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
60	FWD	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
61	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
62	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
63	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
64	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
65	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
66	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
67	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
68	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
69	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
70	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
71	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
72	*140	139	18x16	2705.11	22.5	12.24	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

For Key to References and Abbreviations See Page 95

(Turn to Page 104, Please)

# Announcing A NEW EVANS HEATER



Good news for fleet owners using these trucks. There is now an Evans Heater especially designed to replace original equipment when the factory-installed heaters are worn out or inadequate.

Check the features of this new Evans heavy-duty replacement unit:

- ✓ Vibration from road or engine will not pull it apart.
- ✓ It can be serviced without removing it from firewall.
- ✓ Designed to withstand all existing water pump pressures.
- ✓ Meets all high-output demands; up to 17,325 BTU's.
- ✓ Backed by repair-or-replace parts warranty good for full year or 50,000 miles.

This Evans Heater is built to meet the requirements of the trucks in *your* fleet. It is built for trucks, not passenger cars, and is centered around a heavy-duty, long-life motor; a one-piece, die cast fan; a sturdy fin and tube-type core . . . all combined into a unit that delivers high volume heat with a minimum of maintenance.

You get extra safety for driver, vehicle and cargo . . . with this new Evans Heater. If you want additional information . . . or a catalog of the complete Evans Heater line . . . write Evans Products Co., Dept. Q-1, Plymouth, Michigan.

**Regional Representatives:** Cleveland, Frank A. Chase; Chicago, R. A. Lennox Co., Inc.; Detroit, Chas. F. Murray Sales Co.; Allentown, Pa., P. R. Weidner.

**EVANS PRODUCTS COMPANY also produces:** railroad loading equipment; bicycles and velocipedes; Evaneer fir plywood; fir lumber; Evanite hardboard and Evanite battery separators.

EVANS TRUCK AND BUS HEATERS



—AND VENTILATING SYSTEMS

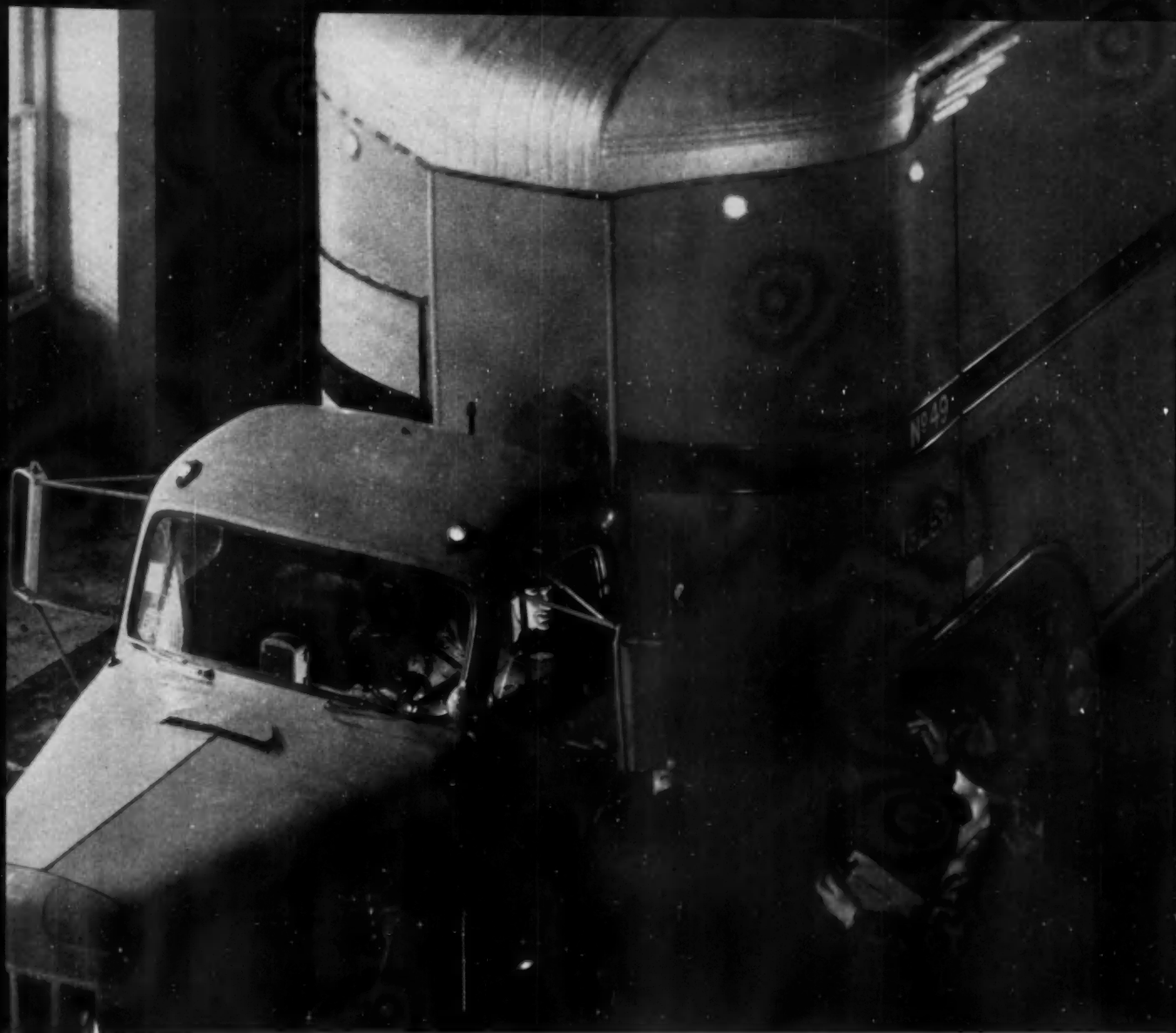


Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE	TIRE SIZES		Chassis Weight (See definition)	ENGINE DETAILS						TRANSMISSION		REAR AXLE		FRONT AXLE	BRAKES			C-A Dimensions (Min. Std. W. B.)	FRAME							
				Standard	Front and Rear		No. of Cylinders	Bore and Stroke	Displacement	Comp. Ratio	Max. Brake H.P. at R.P.M.	Number and Diameter	Governor Standard	Make and Model	Forward Speeds	Make and Model		Gear and Type	Drive & Torque	Clear Ratio			Range in High	Make	Operation Location	Drum Material	Drum Type	Location	Type
1	FWD-Coupled	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
2	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
3	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
4	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
5	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
6	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
7	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
8	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
9	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
10	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
11	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
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14	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
15	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
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24	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
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26	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
27	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
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32	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
33	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
34	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
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37	1000	20000	100	100	100	100	6	4.54	4066	5338	75	3200	7.16	Y-Ford F54C	4	Ford	4	Ford	4	27:1	27:1	27:1	W-214	419	706A	T4	W-214	16	103x34
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49	1000	20000	100	100</																									

For Key to References and Abbreviations See Page 95

Turn to Page 106, Please)





***He drives 20 tons of Murder—***  
if you try to save money on brake  
blocks! Give him the best in braking:  
BENDIX-ECLIPSE — on more new  
vehicles than any other make.



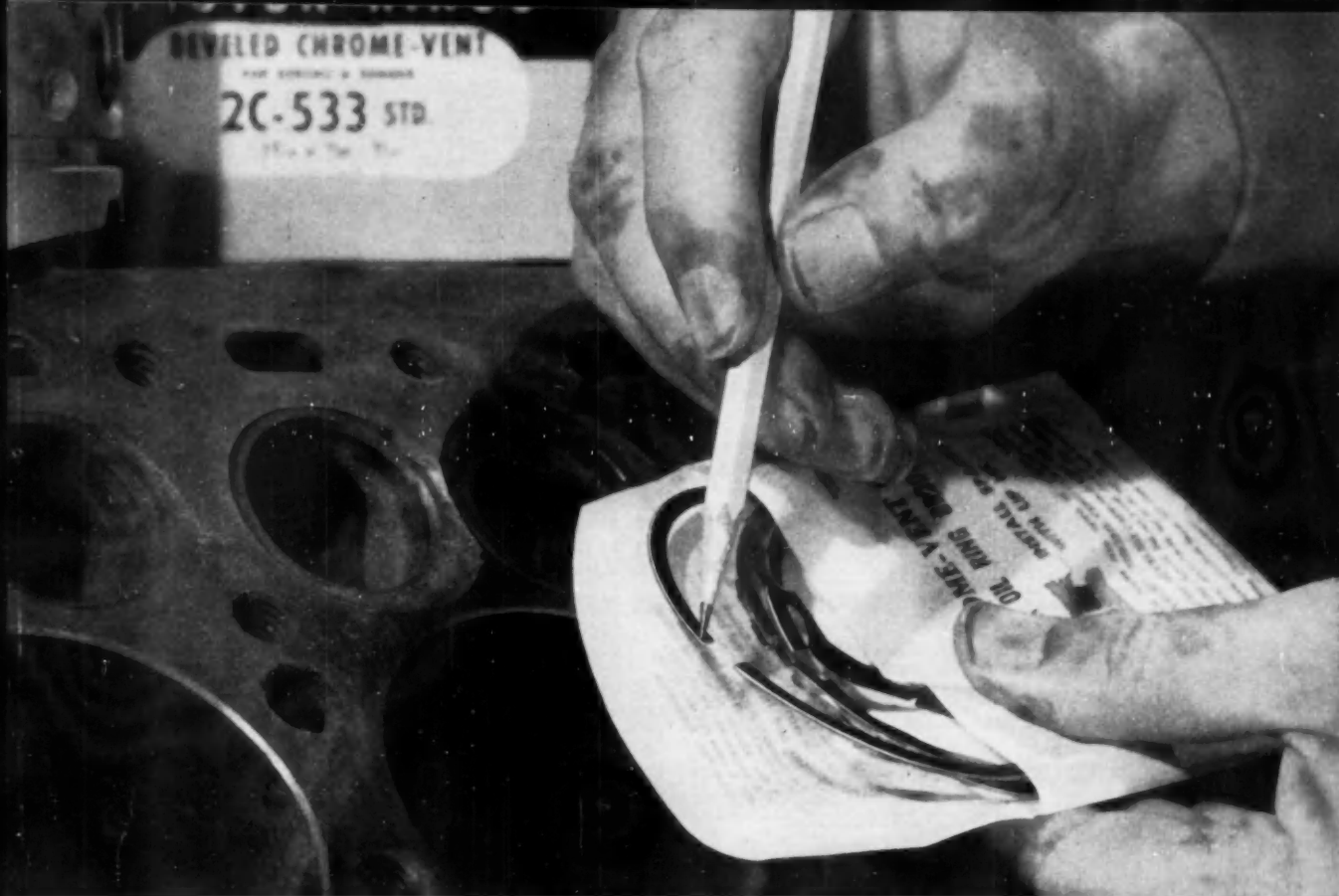
Marshall-Eclipse Division  
Troy, New York





BEVELED CHROME-VENT

2C-533 STD.



Beveled Chrome-Vent Rings in Hastings 2C Chrome sets are covered by U. S. Patent Nos. 2148997, 2511874, 2585042, 2712971

## Re-ring, re-bore or re-sleeve... Chrome-Vent will seat faster, last longer!

This beveled Chrome-Vent oil ring is *why* Hastings 2C Chrome Sets seat so much faster, control oil so much longer—in any engine.

The difference is Hastings' patented, *beveled chrome* rail. With less contact area to wear-in, it seats 3 to 4 times faster than any other chrome ring. And because it makes immediate *fineline* contact with the cylinder wall, you get positive, precision oil control right now—and for the life of the job.

In addition, the thick chrome cap extends *around* the segment, to give at least 3 times greater chrome wearing surface. And with the lighter inner spring, made possible by beveled design, Chrome-Vent makes gentle, soft-pressure contact with any cylinder wall—tapered, out-of-round or re-bored.

When you install Hastings rings—the product of replacement specialists—you can be sure of a good job and positive performance.

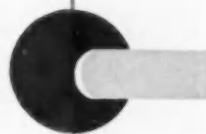
HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN  
Hastings Ltd., Toronto  
Piston Rings • Casite • Wear Reducer • Filters • Spark Plugs

Tough on oil-pumping  
Gentle on cylinder walls



### CONVENTIONAL CHROME RAIL

originated by Hastings...  
now replaced by Hastings  
exclusive Beveled Chrome



## Beveled Chrome-Vent

### BEVELED CHROME RAIL

makes fineline contact with  
cylinder wall for a faster seat.  
Less area to wear-in means  
less time to break-in.



 **HASTINGS** 

**Beveled Chrome-Vent  
Piston Rings**

[illegible]

## IHC Has Semi-Automatic Transmission

**M**OTOR TRUCK DIVISION, International Harvester Co., has introduced a new "Select-O-Matic" transmission for heavy-duty International trucks. It features an electro-hydraulic clutch and high-efficiency torque converter in combination with a 5 speed synchromesh transmission.

It eliminates the clutch pedal, and positive control of gear selection is maintained at all times. Electro-hydraulic clutch is disengaged for shifting by a button located under the gear shift knob.

### Torque Multiplication

Automatic torque multiplication is achieved through the converter which doubles the torque transmitted to the wheels when starting and prevents engine lugging. When more torque is required, for acceleration or slight upgrades, the converter automatically supplies it. As a result, engines operate in maximum efficiency ranges for longer periods and the need for 2-speed axles and auxiliary transmissions under normal conditions is eliminated, says IHC.

Driver effort is further reduced by the fewer number of gear shifts required through use of the torque converter.

### Built to Match Engines

"Select - O - Matic" torque converters are built to match the engines to which they are coupled. Thirteen and 14-in. sizes are offered, each with variations in number of fins and spacing to deliver maximum torque from a specific powerplant.

Torque converter utilizes a variable displacement oil pump to minimize power loss. Transmission is lubricated by the same type hydraulic fluid used in the torque converter.



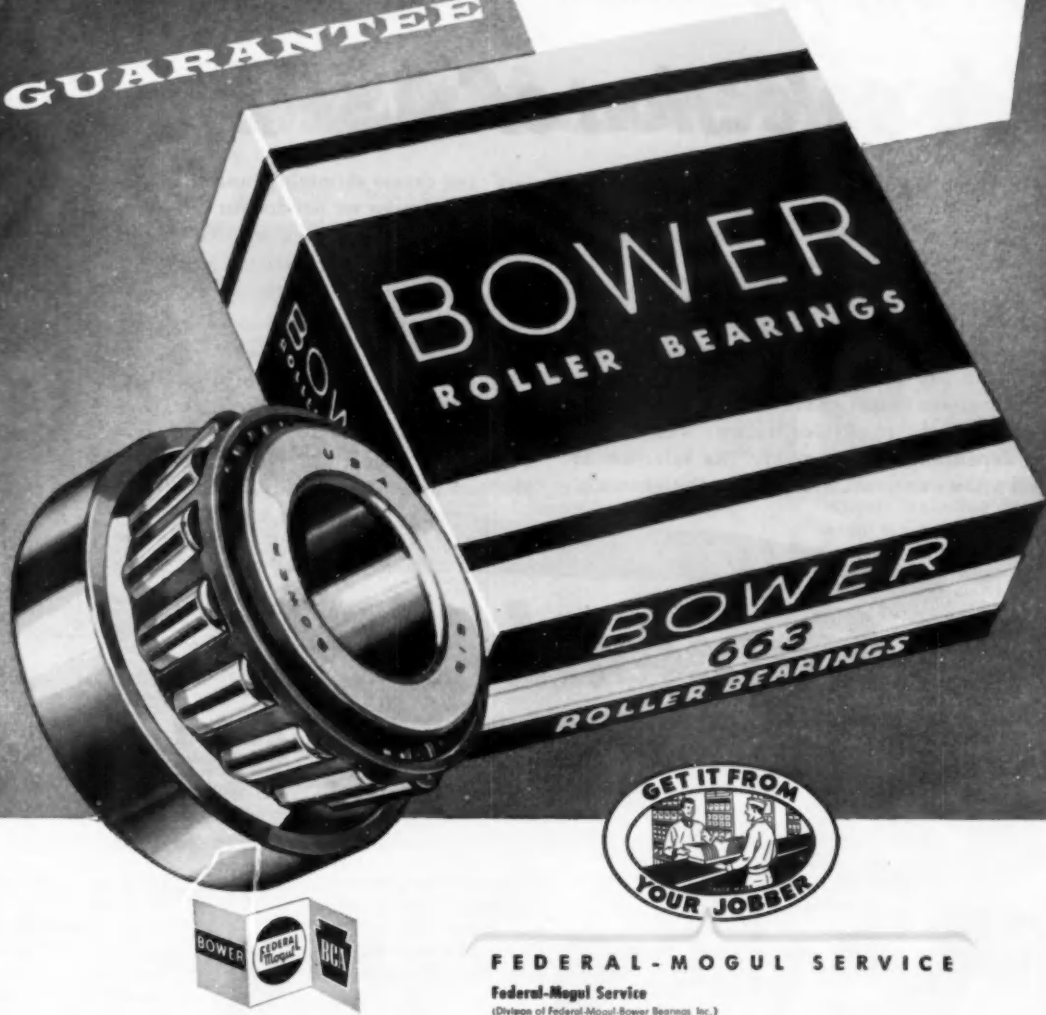
THIS  
BOX  
IS  
YOUR  
GUARANTEE

## of the right automotive bearing and the right bearing service

Roller bearings look alike, and it's practically impossible to tell the good from the "not-so-good" until after they're put into a job.

You can always be sure of the right roller bearings for automotive replacement by insisting on the bearings in these boxes.

Get the Bower roller bearings you need when you need them from your Federal-Mogul Service jobber. He can give you "on-the-spot" service—he knows automotive problems and can help you when you need help.



**FEDERAL-MOGUL SERVICE**

**Federal-Mogul Service**

(Division of Federal-Mogul-Bearing Inc.)  
DETROIT 13, MICHIGAN





**Abner Holmstrum,**  
Superintendent of  
Tractor Shop,  
Watson Bros., Omaha.

One of the Watson Bros'. tractors  
equipped with the ASF Safety 5th Wheel.



*Why Watson Bros....  
leading truckers with  
headquarters in Omaha...  
use ASF Safety 5<sup>th</sup> wheels*

## **Wide selection of ASF brackets**

Safety and economy are uppermost in the mind of any experienced shop superintendent, like Abner Holmstrum of Watson Bros. But plain *convenience* is also something to consider in choosing a 5th Wheel. Here's what Mr. Holmstrum has to say about a mighty convenient option offered by ASF:

"One of the big reasons why our new tractors are being equipped with ASF 5th Wheels is the wide choice of bracket heights.

"It's important to us to have the 5th Wheel plate exactly 48" off the road. Our tractors will vary in height, depending on the make. The selection of brackets allows us to maintain proper height with-

out excess shimming, and the flush-type base is just the design we needed for our adjustable mounting.

"Another feature we like is the safety of the ASF lock design. Our drivers know the wheel is locked, just by looking at the safety latch."

There's just one point which could be added to that statement: *specifying the bracket design of your choice doesn't cost you one extra cent!* You simply make it part of your order. For complete information about ASF Safety 5th Wheels, contact your nearest ASF Distributor or write directly to American Steel Foundries, Hammond Division, Hohman Avenue and Hoffman Street, Hammond, Indiana.

## **Remember this... about ASF Safety 5<sup>th</sup>**

Just the bracket you need—to solve YOUR mounting problem!

Standard bracket—8 $\frac{1}{2}$ " over-all height—as furnished unless otherwise specified when ordering.



Wide-base bracket—for angle-type mounting, without mounting plate. Choice of over-all 8 $\frac{1}{2}$ " or extra low 6 $\frac{3}{4}$ " height.



Flush type, which mounts flush with outside width of 34" truck frame, is designed for use with adjustable mountings. Choice of over-all 8 $\frac{1}{2}$ " or extra-low 6 $\frac{3}{4}$ " mounting height.



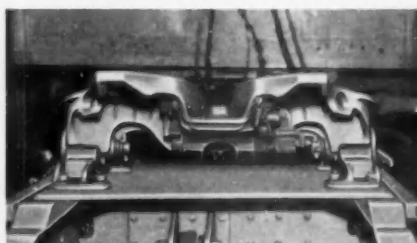


## *helped solve their mounting problems*

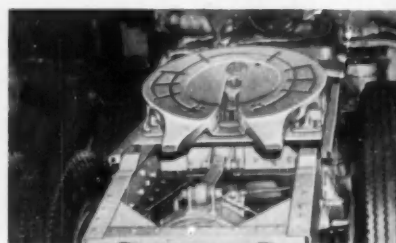
Here's how Watson Bros. build an adjustable mounting



Mounting starts with attachment of specially fabricated rails. Note how ASF flush-type bracket aligns neatly with rail and makes this type of mounting practical.



This is followed by a  $\frac{1}{2}$ " mounting plate, 38" long and 28" wide...



...and completed with ASF Safety 5th Wheel. Mounting has 4 adjustments: wheel can be moved as much as 36" on tractor frame to handle larger trailers without exceeding maximum over-all length.

# wheels

ASF Safety 5th Wheels can be equipped with any of these brackets at time of purchase at no extra charge!



Make an investment  
in safety...  
with

# ASF safety 5<sup>th</sup> wheels



## WHITE MEETS THE CHALLENGE OF TODAY'S TRANSPORTATION TRENDS

### GREATEST LINE OF WHITES . . . EVER!

**MORE THAN EVER BEFORE**, truck operators are faced with trends in transportation that are shrinking profits.

Transportation's most important need is completely modern motor trucks . . . not just new models—not a face-lifting—not advertising claims

. . . But rugged trucks that can take today's higher mileages and tougher schedules

. . . modern power that insures maximum operating economy with bigger payloads

. . . and, above all, creative payload engineering

focused right on the specific problems of each truck operator to achieve payloads as much as 20% higher

. . . do as much as 25% more work.

White has for 1957 its greatest line of trucks in history—precision tools of transportation engineered to each business for the most efficient, profitable operation.

More than ever before—it's extra profitable to **GO WHITE . . . NOW!**

**THE WHITE MOTOR COMPANY • CLEVELAND 1, OHIO**



**Autocar**

**AUTOCAR DIVISION**  
Exton, Pa.

**WHITE 9000**  
WITH 90-INCH DIMENSION

(Front of Bumper to Back of Cab) a Payload Advance That Boosts Payload Profits in Highway Service



For more than 55 years  
the greatest name in trucks



**WHITE 3000**

**FIRST WITH THE POWER-LIFT CAB**

Now Available in Gasoline or Diesel Power  
—Another Highway Payload Leader!



# Look into Air Conditioned Buses

Continued from Page 70

Superintendent of equipment, K. M. Kendall reports that customer acceptance is satisfactory and that mechanically the jobs turn out all the performance they need. But he adds this sad note which must be recorded to make this discussion complete:

"Optimism as to results prompted the ordering of 50 units in 1947. Revenue results from air conditioned lines failed to justify the optimism and discouraged additional units."

When we asked why some of these units might not have been

converted back to operation without air conditioning Kendall reported that the cost of changing the permanent window sash was the principal factor here.

## St. Louis Public Service

Comments from St. Louis Public Service can be brief and to the point. They have ordered 100 units. That is a good indication that their tests have successfully passed all three phases (see opening paragraph) of the experimental stage. This is an important tribute to the Thermo-King equipment. It is entirely externally mounted on the roof, has the significant features of being easily applied and easily changed as a unit in the event of service needs. While no direct figures are available on actual performance, public acceptance is obvious. The cost is approximately \$2900 per bus.

On actual performance, Supt. of Equipment W. E. Williamson reports:

"Temperature and relative humidity inside the coach depend of course on passenger load and ambient temperatures outside. In St. Louis, summer temperatures near 100 deg are common and relative humidity runs about 70 per cent much of the time. We are able to maintain a differential of 10 to 15 deg in temperature (when it is 100 deg outside). The differential humidity runs about the same".

(TURN TO PAGE 116, PLEASE)



## Refrigerator Bodies for You!

Hackney refrigerator bodies always meet your needs and stay ahead of the parade, because "we're working with you." Hackney's factory representatives are at your beck and call. They keep their fingers on the pulse of your industry. Behind them is a staff of specialists interpreting your needs through development and production of better refrigerator bodies. Over a century of know-how is backed by a plant as modern as tomorrow, equipped to turn out the miracles of today. One Hackney refrigerator body in your fleet will prove its superiority. Let us give you all the facts.



**Hackney Bros. Body Co.**  
Wilson, N. C. Phone 7-0105

Builders of Better Bodies Since 1854

## 100,000 by Truck



With appropriate ceremonies, National Homes Corp. last month marked shipment of its 100,000th prefabricated home. Needless to say, all 100,000 moved to their respective building sites by truck-trailer combination. National uses 250 trailers, especially built by Highway Trailer Co. to hold the prefabricated sections, to make deliveries from its plants in Lafayette, Ind., Horseheads, N. Y., and Tyler, Texas.



# THOR IMPACT WRENCHES

Automotive service industry's largest choice

## 3 electric wrenches



### THOR MODEL 56 SPEEDWRENCH

You can pay a lot more and not come close to matching the features of this Thor powerhouse. Finger-tip reverse for easy one-hand operation. More anti-friction bearings than any wrench at any price.

ONLY  
**\$89<sup>50</sup>**



THOR EW-6  
SILVERLINE 1/2" SQUARE DRIVE



THOR EW-10  
SILVERLINE 1/2" SQUARE DRIVE



#### RIGHT ANGLE ATTACHMENTS

Can be used on any 1/2" square drive impact wrench, air or electric. Compact size assures reaching hard-to-get places in engine and body work.



Kits available including tools, carrying case, popular hexagon sockets.

Only Thor offers an impact wrench for every job. Pick out the impact wrench you want and ask your Thor automotive jobber for a free trial. Thor Power Tool Company, Aurora, Illinois.



## 5 air wrenches



### THOR MODEL G2W AIR IMPACT WRENCH

Introduced just a few months ago and already a sensation! Compact (only 6 1/2" long). Most powerful 1/2" square drive impact wrench on the market. Impact mechanism has only four moving parts. Controlled torque.

ONLY  
**\$127<sup>50</sup>**



THOR A4W  
3/4" SQUARE DRIVE  
1" BOLT SIZE CAPACITY



THOR HEAVY DUTY  
48HJ WRENCH  
1" Square Drive—handles  
3/4" bolt capacity



THOR A5W  
1/2" SQUARE DRIVE  
1" BOLT SIZE CAPACITY



THOR HEAVY DUTY  
A7W WRENCH  
1" Square Drive—handles  
1 1/4" bolt capacity



RIGHT ANGLE  
ATTACHMENTS  
for G2W, A4W, A5W  
detachable—adjustable  
to 6 positions.



KITS AVAILABLE  
for G2W AND A4W  
Includes impact wrench, right  
angle attachment, six popular  
size sockets and metal carry-  
ing case.

ALL THOR IMPACT WRENCHES SOLD ON EASY PAYMENT PLAN

**THOR POWER TOOL COMPANY**

Branches in all principal cities

## Air Conditioned Buses

Continued from Page 114

### Dallas Transit

Most unusual installation of all is the Frigikar installation on two Dallas Transit coaches. Both are Southern Coach Model No. DHC-45. There are five electrically powered identical units using a 1-hp Tecumseh compressor, and a con-

denser and evaporator with 1½-ton ratings. Sources of the electrical power is a 10-kw, 220 volt electrical generating plant powered by a 20-hp Onan 2-cyl horizontally opposed air-cooled engine. Approximate cost of the installation including both equipment and labor was \$3000 each.

Reports Superintendent of Equipment, J. T. Hurry: "These coaches went into service late in the season. Therefor comfort data

in the coach is not as complete as might be desired. However on a 100-deg day, during the afternoon rush hour, passengers did not raise windows and the interior was comfortable. On many days during off-peak hours, operators reported that they had turned off one or more of the units."

The operation has not been without failures. For instance, on one of the units spark plugs had to be changed after 585 hours of operation, and there were three reports of water dripping into the coach. On the other, cooling units failed three times. But in each case, the trouble was laid to faulty expansion valves which have since been corrected.

On the whole, the operation appears successful and it is expected that three or four more units of a similar nature will be added during 1957.

END

Please Resume Reading Page 71

**ACCURACY HERE...**  
Can Save Costly Engine Damage!



for trucks, buses and cars

The complete line of Stewart-Warner instruments offers a wide range of ammeters—every instrument you need for any automotive purpose. Every one of them is built to famous Stewart-Warner standards of accuracy—to give dependable warning indications before oil drains away, before coolant boils off or fuel runs out . . . before countless other engine troubles cause costly damage.

Look for the quality gauges on display at your Stewart-Warner jobber. Stewart-Warner replacement gauges are heavy-duty, with chrome bezels and rust-proofed steel cases. All mount through the front of the panel and have individual mounting brackets. Pressure and temperature warning switches for visible or audible signal also available. See your Stewart-Warner jobber today.



**STEWART-WARNER**

Dept. DD-17, 1840 Diversey Parkway, Chicago 14, Ill.



Water Temperature Gauges



Oil Gauge



Ammeter

## Ford's New COE's

Continued from Page 86

ward on spring pressure when a safety catch is released. Thus engine and transmission are accessible for maintenance work. Hydraulic clutch is standard on all models, or a heavy-duty automatic transmission is optional.

### Driver Features

Forward visibility on Ford's tilt cab truck is 1656 sq in. Cabs have interior steps instead of outside running boards. Shoulder room has been increased almost a foot.

Suspended pedals reduce driver fatigue and permit sealing the floor-board against the entry of dust and cold air. A fold-down arm rest is offered as an option. When it is folded up, it becomes part of the seat back.

The new truck can be obtained with either standard cab or with the more luxurious custom cab which features deluxe exterior and interior appearance, 4-in. deep rubber seat cushions.

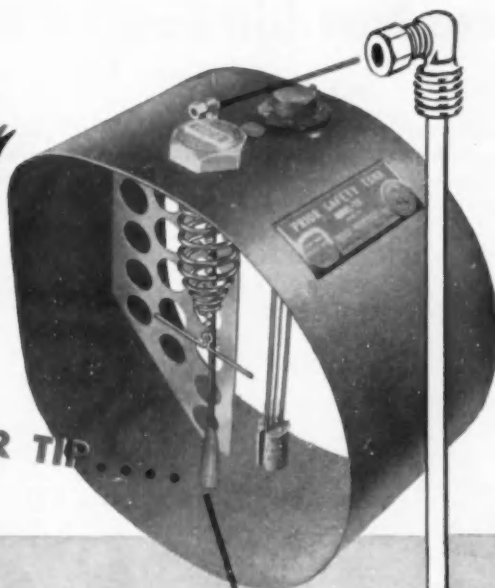
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Please Resume Reading Page 88

# Prior

## IS FIRST AGAIN

WITH A SPECIAL MONEL FILTER TIP



This is the same type of filter used by leading truck manufacturers in their tanks who have completely eliminated the need for filters in the fuel lines.

**BUILT-IN PROTECTION...** the kind of worry-free protection that prevents any foreign deposits from entering the fuel line... this is the kind of protection you can rely on with this new filter that stops harmful deposits at the mouth of the pick-up line.

One of the biggest advancements for safety in the safety tank industry in many years, this new filter is now standard equipment on all Prior Safety Gasoline Tanks at no extra cost. The new filter-tip removable fuel supply line can be easily installed in *any* Prior Safety Tank.

See your distributor or write direct to

**PRIOR PRODUCTS, INC.**

P. O. BOX 349

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MIDDLETOWN, OHIO

DALLAS, TEXAS

**MONEL  
FILTER  
TIP**

# Frisco's Mule Lifts Fore and Aft

Continued from Page 81

front bumper can be used with extension boom to enable the Mule to retrieve spilled cargo out of muddy or unapproachable roadsides (Fig. 4). The winch is connected by a direct driveshaft, with two universal joints, to a left-hand power take-off.

It can lift up to 1000-lb at boom's length and has snaked refrigerators and ranges out of a swamp quite handily. This winch works faster than the power winch on the back and a lot of cargo can be fished in pretty quickly once we get on the job.

*forget about demurrage!*

# LEASE

**the oxygen and acetylene cylinders you need**



Your LINDE Distributor has a moneysaving plan under which you can lease LINDE Oxygen and PREST-O-LITE Acetylene cylinders. Under this plan, you get the cylinders you want, when you want them, where you want them, and as many as you need—and never get a bill for demurrage. **TWO SIZES EACH OF OXYGEN AND ACETYLENE CYLINDERS ARE AVAILABLE.** Choose between oxygen cylinders of 80 or 150 cu. ft. capacity and acetylene cylinders of 60 or 133 cu. ft. capacity. Select the combination that best meets your needs.

**Cylinders Are Reserved for You.** When your leased cylinders are empty, simply exchange them for full ones. No waiting to have the empties refilled. All the gas you need is always available.

**Your Initial Cost is the Only Cost** under ordinary circumstances. LINDE AIR PRODUCTS COMPANY maintains your cylinders against normal wear and inspects them periodically at no cost to you.

**SEE YOUR "LINDE" DISTRIBUTOR** today and ask about a cylinder lease plan to fit your needs. Or write LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: LINDE AIR PRODUCTS COMPANY, Division of Union Carbide Canada Limited, Toronto.

The terms "Linde" and "Prest-O-Lite" are registered trade-marks of Union Carbide and Carbon Corporation.

The long boom in front position will lower enough to run inside a trailer for stowing cargo. In that case the guy chains lay flat across the cab roof. This is what determined the heights of our headache rack. Extra lengths of chain used for guying the long boom are usually stowed on steel hooks welded to the headache rack.

## Accessories . . .

With a heavy lift like a tractor, or when rolling a trailer back on its wheels, we often support the roll bumper with a couple of "stiff-legs" (at left in Fig. 5). These are fastened between pads on the under side of the roll



FIG. 5. Stiff-legs and mud cleats are among the "Mule's" handy features

bumper at either end. A bolt goes through one pad, the two arms of the clevis, then the other pad. Where the clevis joins the stiff-leg another bolt joins them at right angles to the first bolt making a sort of universal joint.

This universal joint permits the stiff leg to be set on rough ground at any angle. Also we can pull ahead, dragging the stiff legs, then rock back unto them again without laying a hand on them.

## Mud Track . . .

To keep the tires from sliding in mud under the thrust of a suspended weight, short pieces of "track" or cleats were made to go under each dual wheel (at right in Fig. 5).

These are steel plates, 24-in. square with three lengths of 2 x 2½-in. angle irons welded across the under sides to jab into the ground. A 3-in. pipe was sliced in half and welded onto the top of each plate to fit between pairs of tires, preventing sideslip off the plate. A length of chain bolted

(TURN TO PAGE 120, PLEASE)

# 500 More SCENICRUISERS for Greyhound



## ..... making 1,000 with **VICKERS®** HYDRAULIC POWER STEERING

Performance of Vickers Hydraulic Power Steering on 700 Greyhound Highway Traveler Coaches brought about its use on the first 500 Greyhound Scenicruisers. Experience with these Ultra-Modern Coaches induced Greyhound to order 500 more . . . making 1,000 Scenicruisers with Vickers Hydraulic Power Steering.

Greyhound uses Vickers Hydraulic Power Steering because of its contribution to MAXIMUM SAFETY and smoothness of operation . . . and because it combines dependability with long trouble-free life. "Finger-touch" control eases the driver's

job . . . keeping him fresh, alert, efficient, safe. Front wheel shock from obstructions is automatically absorbed by the power mechanism . . . there can be no kick-back at the steering wheel. The advantages of extra steering power and quick maneuverability have been proved under emergency conditions . . . on city streets as well as the open highway.

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Vickers Hydraulic Power Steering Booster does the actual work of steering. It can be furnished to provide any desired steering wheel rim pull.

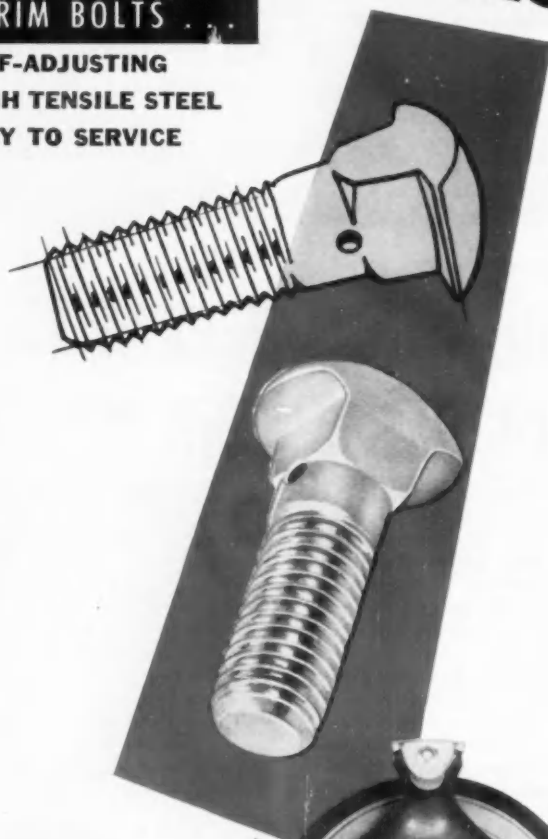
Engine-driven Vickers Balanced Vane Type Pump supplies the power for steering. This extremely compact pump has integral volume control and relief valves, and oil reservoir.



# ERIE WHEELS and BRAKE DRUMS

## ERIE RIM BOLTS

- SELF-ADJUSTING
- HIGH TENSILE STEEL
- EASY TO SERVICE



*Automotive  
Wheel Division*

**ERIE  
MALLEABLE  
IRON COMPANY**  
ERIE, PENNSYLVANIA

## Frisco's Mule

Continued from Page 118

into the end of the pipe, reaches up to catch in a slot on the roll bumper. Once the track's rear wheels have rolled up on the cleats they will stay put.

### Boom Connectors . . .

The boom extension pipes are connected to the main boom by 15-in. long bars and cold-rolled steel (Fig. 6). They have to be solid because the heaviest strain on a boom comes at the middle. A collar of quarter-inch metal welded around their middle makes the bars fit equally into both pipes.

Stub legs of the pulley assembly are 2½-in. cold-rolled steel bar



**FIG. 6.** Ridge on easily-removed boom connectors keeps them in proper place

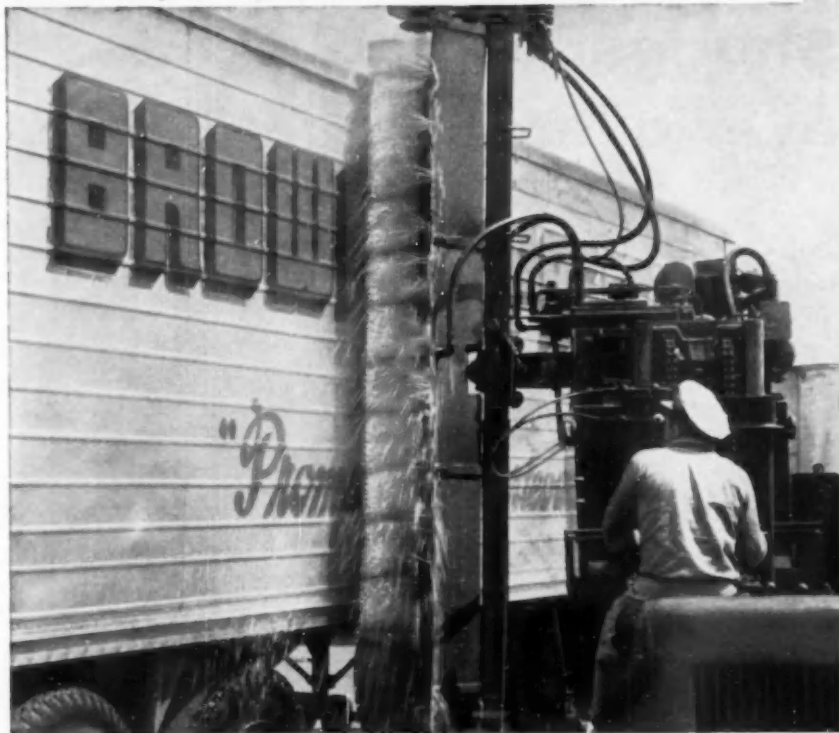
stock welded to the plates that serve as the pulley block. Loops for the chain links are double thickness of ¾-in. bars welded together and to the plate. The pulley axle is a rugged 1½ in., with a large bolt head and a pinned nut.

A hose looped over the top of the bumper frame is a 50-ft length used to tie into the Schrader connection on the two-speed rear axle of a towed tractor. This permits the air pressure to be kept on, letting the tractor be towed at high speed for short distances without burning up the two-speed axle.

**END**

Please Resume Reading Page 82

## Brown Express gets nine times greater brush life



Fountain brushes clean hard-to-reach areas. Water flows through the handle and out the face of the brush, washing away dirt loosened by the tough TYNEX bristles.

## Brushes with Du Pont TYNEX® nylon bristles clean thoroughly... economically

Operators of railroads, bus lines and trucking companies are finding that mechanical washers give them substantial savings in labor and maintenance costs.

The owners of the Brown Express Company in San Antonio, Texas—operators of an 843-unit fleet—have been able to make additional savings by installing brushes with TYNEX nylon bristles in their mobile washer. The washer is manufactured by Ross & White Company of Chicago, Illinois.

The Maintenance Department of

Brown Express reports that the additional cost of the TYNEX nylon brushes has already been justified, for they have lasted twice as long as brushes formerly used, and are showing very little wear. It is estimated they will last six to ten times longer.

The initial cost of brushes bristled with TYNEX is slightly higher than those with other bristling materials, but over-all cost is lower because TYNEX bristles stay lively and wear longer... even when in contact with heat, rough

surfaces, water, detergents and oils. The superintendent of maintenance for Brown Express sums it up as follows: "These brushes with TYNEX nylon bristles are a 100% improvement over those previously employed."

So if your labor and maintenance costs are up, or if you are having difficulty in keeping your units consistently clean, you will want to look into the benefits offered by TYNEX nylon bristles. For more information, mail the coupon below.

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Western-built... ideal anywhere, coast-to-coast!**

They're here now! The ideal trucks for top payload, top accessibility!

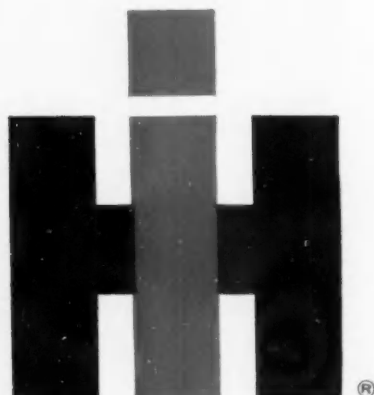
International Trucks built to last, with a basic design that won't become obsolete. Trucks with the shortest practical BC dimension, and lightweight construction for maximum payload weight or length! *Comfortable* tilt-cabs with better-than-conventional service accessibility.

You can standardize your fleet on one type, one make! Look what that saves on interchangeability alone!

They're Western type trucks, with the versatility to make them ideal anywhere, coast to coast. Flexible enough to haul any legal load combination—4- or 6-wheel, gasoline or diesel, semis, dromedaries, transcontinentals or doubles!

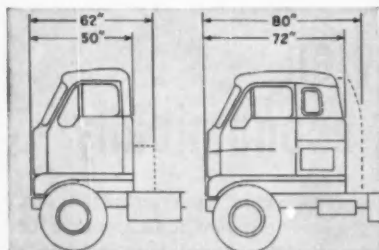
Check your International Dealer right now, on this *newest* reason why, over the years, International Trucks cost *least* to own!\*

\*Signed statements in our files, from fleet owners throughout the U.S., back up this statement.



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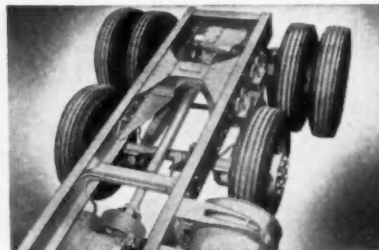
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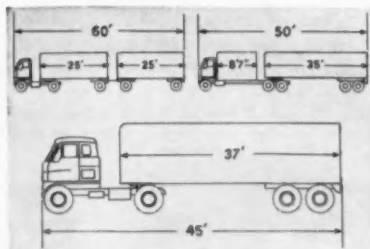
**1** Short BC dimension, lighter weight mean bigger payloads within legal limits. Four short-BC tilt-cabs—50-inch, "50-62" with 12-inch extended engine cover for largest diesel, 72-inch with or without sleeper, 80-inch with sleeper.



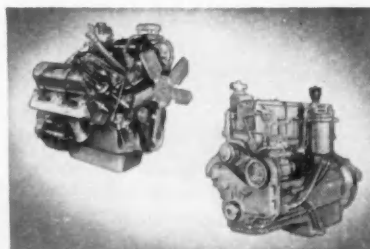
**2** Quicker, easier access to engine compartment, steering gear, linkage, front brakes, etc., than most conventional trucks! One man operating the hydraulic hand pump tilts cab 55 degrees in less than one minute. Cuts downtime costs.



**3** Western-built COE's have lightweight construction to reduce truck weight, increase payload pounds and profits. Aluminum frames, brackets, wheels, lightweight tandems with rubber cushion suspension and other components.



**4** Now, standardize your fleet whether you pull transcontinentals, double trailers, dromedaries, up to 37-ft. trailers in 45-ft. state limits or any equipment. Match your operation with the widest choice of power, transmissions and axles.



**5** Choice of 11 brawny power plants built for long-lasting economy. Three new gasoline powered V-8's, 206, 226 and 257 hp., 8 diesels up to 335 hp. Name the job, International has the load-moving power that costs you *least* to own.



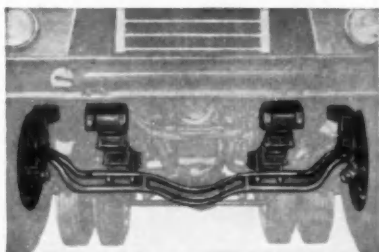
**6** 1672 sq. in. windshield area is nearly twice the size of most other trucks. High, forward driver location for the best, safest vision you can get. Wing-type drop door windows permit lower mirror mountings and excellent side vision.

cost least to own!



This is the great new International 50-, 72-, or 80-inch tilt-cab. Two series—one with a wide choice of diesel engines, the other with up to 257 hp. V-8 engines. 4- and 6-wheelers with GCW

ratings of 55,000 to 76,800 lbs. All feature more payload space and less truck weight . . . quick, easy engine accessibility and a host of new money-saving, money-making advantages.



**7** Balanced heavy-duty front end for maximum legal weight without overload. 11,000 and 15,000 lbs. capacity heat-treated high carbon steel axles. 4-inch wide springs with threaded pins and bushings for added stability and life.

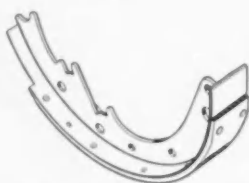


**8** New cab comfort and convenience for easier, safer driving. New steering angle for best leverage and control. Seat adjusts to nearly any position. High capacity heater for all-time comfort. Permanently sealed, sound-proofed engine cover.



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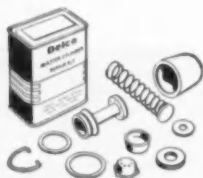
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toughest automotive engine bearings  
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## Moraine Products

Division of General Motors, Dayton, Ohio

# Look Before You Lease (ICC Regs)

Continued from Page 71

carried on the vehicle while the lease is in effect.

## Carrier Responsibility

The renting carrier must check the vehicle on the form prescribed in the new regulation. It provides a check sheet so as to be sure the

vehicle meets requirements of the Commission's Motor Carrier Safety Regulations as they apply to "Parts and Accessories Necessary for Safe Operation" and "Inspection and Maintenance" (Parts No. 193 and 196). When the leased vehicle is to haul explosives or dangerous

articles, the required check includes the "Safe Transportation of Explosives" section of the Safety Regs. (Part No. 197).

When the vehicle does not comply with the safety regs as indicated above, the new rules say that the carrier "shall not" take possession of the vehicle. Note too, that the check sheet must be signed by an officer, partner or owner of the carrier certifying that the person who made the inspection was authorized to do so.

In so far as the driver is concerned, the carrier has to:

1. Be sure the driver is familiar with Parts No. 192, 193, 195 and 196 of the Motor Carrier Safety Regulations (Driving of Motor Vehicles, Parts and Accessories Necessary for Safe Operation, Hours of Service of Drivers and Inspection and Maintenance).

2. Be sure employment of the driver will not result in violation of the above sections of the Safety Regs.

3. Get from the driver a physical exam certificate (or photostat thereof) as required by Part No. 191 of the Safety Regs (Qualifications of Drivers). This is to be kept in the carrier's file.

## Identification and Records

A vehicle rented under these provisions must be identified and labelled with the renting carrier's name as provided in the Commission's "Identification of Motor-Carrier Vehicles," Ex Parte No. MC-41, Part No. 166. If the sign or label is re-usable, the renting carrier is required to put a serial number on each sign and keep a record of those in use. When the lease terminates, all identification is to be removed from the vehicle.

Records required to be kept by the renting carrier also include a record of each trip made by the rented vehicle showing:

1. Name and address of vehicle's owner.
2. Point of origin.
3. Time and date of departure.
4. Point of final destination.
5. Serial number of any identification sign used.
6. Description of the cargo carried.

(TURN TO PAGE 128, PLEASE)

## A BRADEN WINCH

and a  
Crane

make  
difficult  
handling  
jobs

easy



BRADEN Truck Winches turn difficult handling jobs into easy ones. Whether used by themselves, with gin pole or crane, an operator can keep heavy loads under perfect control with complete safety.

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what color  
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## Look Before You Lease

Continued from Page 126

This record is to be kept both in the office of the renting carrier and on the vehicle when the lease is for less than 30 days. When the record is available at the renting carrier's office, it is not required to be in the vehicle when the lease is for 30 days or longer.

### Exceptions

Certain exceptions are permitted by the Commission to these rules affecting the usual leased operation.

- The sub-leasing for less than 30 days of a vehicle rented with owner-driver is allowed when the agreement is between two common or two contract carriers. Note that the carrier doing the renting first has to have a lease with the vehicle's owner for 30 days or more duration. The carrier who sub-leases the vehicle must inspect and identify the sub-leased vehicle as outlined above.

- Vehicles leased for movement

of railway express or railroad freight between rail stations on rail billing (substituted motor-for-rail service) are not required to meet the above regulations except for the inspection and identification provisions.

- Regulations do not apply to vehicles operated within (1) a city, (2) adjoining cities or (3) a commercial zone as defined by the ICC. However, such vehicles when leased must be inspected and identified, however.

- Common and contract carriers can rent vehicles without drivers from vehicle rental companies without meeting the above regulations, except that the rented vehicle must be inspected and identified as provided above.

- When a trailer is leased separately from a tractor, the only parts of the new regs that apply are the inspection and identification rules.

- Vehicles owned or leased by for-hire automobile carriers or tank truck operators used to haul motor vehicles or liquid commodities may (TURN TO PAGE 133, PLEASE)

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Give him the best



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- Sure safe heat, thermostatically controlled
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The Cleveland Graphite Bronze Co.  
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COMMERCIAL CAR JOURNAL, January, 1957



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is a Good Man  
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## MECHANICS IS PROUD TO SERVE THE BLUE BOOK OF AMERICAN INDUSTRY From Drawing Board to Production

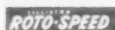
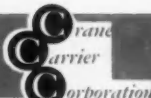
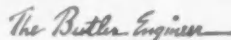
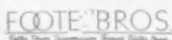


The trade marks on these pages represent some of the companies we have been privileged to serve recently. Working with them, and many others, from drawing board to final production, Mechanics engineers have accumulated a wide range of universal joint know-how. They have solved power transmission and control problems such as clearance, torque, weight, angle, alignment, balance, overload, shock, speed changes, reversals and stamina with improved designs, metals, machining, tolerances, heat treating, hardening,

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Illinois Washington Penna.

## *Successful Trucking*

Another of the Fleets using Brown Aluminum Trailers

## Look Before You Lease

Continued from Page 128

be leased or sub-leased with driver for less than 30 days to other for-hire automobile carriers or tank truck operators.

- For-hire carriers can lease with driver for less than 30 days vehicles belonging to farmers, agricultural cooperatives or private carriers of certain perishable property or "which is exempt" under Section 203(b)(6) of the Interstate Commerce Act. Such operation must fall within the exceptions of Section 204(f)(1) or (2) of the IC Act. The for-hire carrier must obtain from the vehicle owner (before the lease is executed) a statement certifying (1) that the vehicle does meet these requirements, and (2) the origin, destination and time of beginning and ending of the last movement that brings the vehicle within the exceptions of Section 204(f).

- When a for-hire carrier sub-leases a vehicle under these regulations from another common or contract carrier, the exclusive control and complete responsibility for the vehicle passes to that carrier.

- In the case of a household goods carrier entering into long term leases with an owner-operator for intermittent operations, the exclusive control and complete responsibility for the vehicle applies only when the vehicle is being operated by or for the household goods carrier.

- A copy of the lease is not required on the vehicle when a statement certifying (1) the name of the renting carrier, (2) name of the vehicle's owner, (3) date of the lease, (4) duration of the lease, (5) restrictions on commodities to be transported and (6) location of the original of the lease is (TURN TO PAGE 136, PLEASE)

*Dynamometer Mechanic:* "You never kiss me except when you want money."

*Spendthrift Wifey:* "Well, isn't that often enough?"

## Fleet Course Calendar

HERE is an up-to-date calendar of fleet training courses for 1957. For complete addresses to write to for further information about the courses listed, see the Fleet Course Directory appearing in the November, 1956, issue, page 314.

### Driver Training

North Carolina State College—One-month long courses begin Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 20, June 24, July 29, Sept. 2, Sept. 30, Oct. 28, Nov. 25.

### Fleet Supervisor

University of Alabama—Jan. 21-25.  
University of Maryland—Apr. 8-12.

### Transportation Courses

Evening courses in (1) Transportation Practices, (2) Traffic Management, (3) Motor Carrier Operations, (4) Selling Transportation Service, (5) Freight Claims for Loss and Damage, (6) Current Transportation Problems, (7) Motor Carrier Terminal Operations begin the week of Jan. 28, 1957, Northeastern University, Boston, Mass.

# Trucks perform best!

On High Octane  
LP-Gas with



## CENTURY carburetors

3C Controlled  
Combustion  
Carburetion

with metering  
valve controlled  
combustion

...and here's why

Perfect fuel mixtures are guaranteed by Century's metering valve regardless of changing conditions, temperatures or altitudes. You get economy and performance because the metering valve controls and proportions the gas exactly as preset at the factory to the engine's performance curve. No elaborate adjustments, only a tune up is required—just set it! Seal it! And forget it!

Get the facts, write for Bulletin No. G-75

**CENTURY**  
GAS EQUIPMENT COMPANY  
4855 E. Rosecrans Blvd., Paramount, Calif.

Faster Starting!  
Perfect Idling! Economy!

A CENTURY FOR  
EVERY TRUCK





Stop  
Radio-TV  
Interference  
Without  
Gadgets!





# *exclusive TVRS cable*

The same conductor that carries the current  
prevents ignition interference and  
increases spark plug life

Packard Electric T.V.R.S. ignition cable has a non-metallic conductor that does two jobs simultaneously: It carries the current that makes the spark; and it controls the intensity of spark. Thus, with one essential part, you offer increased spark plug life and prevent ignition interference in the car radio or on nearby television sets.

Extensive laboratory tests prove that by distributing resistance over the entire ignition wiring circuit, T.V.R.S. cable does a more effective job of

suppression than can be obtained by spot suppressors. As a result, there is far less broadcasting of interference and less spark plug erosion.

Packard T.V.R.S. cable is original equipment on almost half of the vehicles made today. And, since no spot suppressor can equal its performance, T.V.R.S. is an important improvement feature for vehicles not factory-equipped with T.V.R.S. Available everywhere from Packard jobbers.



## READY-TO-INSTALL KITS

Complete packaged ignition wiring sets with terminals attached are available. Packard Electric T.V.R.S. Suppressor Cable is also available on spools with separate terminals and illustrated instructions for making fast, trouble-free attachments. Ask for Packard Kit 420-K.

# Packard Electric

Warren, Ohio



*"Live Wire" division of General Motors*

## Look Before You Lease

Continued from Page 133

carried instead. This statement is to be prepared by the renting carrier.

### Common Carrier Interchange

Rules controlling the lease or agreement between common carriers for interchange of equipment

are set forth in the new leasing regs. Basically, they require the agreement to (1) describe the vehicles to be interchanged, (2) the points of interchange, (3) the use made of the vehicles and (4) the payment for such use. It must be signed by authorized representatives of both carriers.

The operating authority of the common carriers must cover the movement contemplated, and the haul must be on a through bill of

lading issued by the originating carrier. Charges must be collected as if it were a single-line haul. Payment for use of equipment shall be kept separate from the carrier's share of the revenue for the transportation.

Responsibility for checking safety requirements and the safety requirements themselves are the same as for the usual leased operation. Vehicle cannot be operated until defects have been corrected.

Identification of vehicles is also the same as for usual leased operation as outlined above. A copy of the interchange must be carried on the power unit at all times when it is being operated in interchange service. As an alternative to this, a statement certifying (1) the name of the company operating the equipment, (2) the name of the company owning the vehicle or state registration number, (3) the specific point of interchange, (4) date and time of assuming responsibility for the vehicle and (5) the use to be made of the vehicle. This must be signed by authorized representatives of both carriers.

### Leasing to Others

The new regs prohibit rental of vehicles with drivers by common or contract carriers to private carriers or shippers, unless:

1. Such service is specified in the carrier's operating authority, or
2. The vehicles rented are to be used for transport within the exemption provisions of Section 203(b) (7) or (8) of the IC Act.

Also, Common and contract carriers cannot rent vehicles without drivers to private carriers or shippers, unless:

1. The vehicle rented is to be used for transport within the exemption provision of Section 203(b) (7) or (8) of the IC Act, or
2. The carrier offering a vehicle for rent transports property wholly for and on billing of railroads.

However it is possible for contract carriers to rent vehicles without drivers to private carriers or shippers when prior approval of the rental contract is obtained from the Commission.

END

Please Resume Reading Page 72

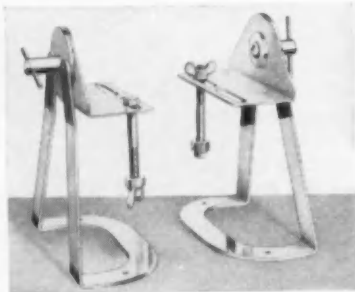
## New K-D Tools

### NEW K-D 140 Battery Handler

To install, remove and carry Batteries with safety and ease. For all widths of popular long or short types of 6- and 12-volt batteries. See illustrations.

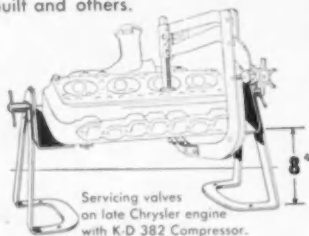


Quick-acting screw with T-handle for speedy, safe operation. Grips battery case securely for tilting and maneuvering in tight places. Simple to use, also safe, convenient and durable. Rustproof finish.



### NEW K-D No. 175 Universal, Rotating CYLINDER HEAD HOLDER

Popularly priced. Holds all sizes of cylinder heads in any position. Services GM, Chrysler-built, Ford-built and others.



Light weight, compact. Perfectly balanced to stand firmly on workbench. Bases can be mounted if desired. Heads bolt to slotted support brackets. Slots permit mounting various types and widths heads. Brackets can be locked in at any angle with the T-handles.

**FREE CATALOG** Describes, illustrates new tools plus 150 other K-D Tools to make hard jobs easy. Write today.

**K-D TOOLS**  
K-D MFG. CO. LANCASTER, PA.

FOR EXTRA SAFETY . . .

# MEET THE NEW ICC REGULATIONS WITH MIDLAND EQUIPMENT!



Dash hand valve is automatic and manual, functioning as a part of Midland's breakaway system. If emergency line pressure goes below 40 PSI, it automatically applies trailer brakes. They may also be applied and released manually by driver.

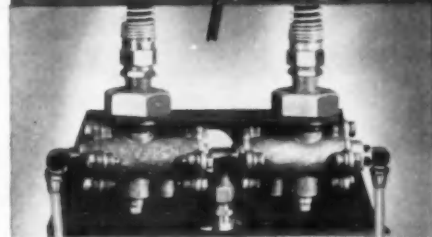
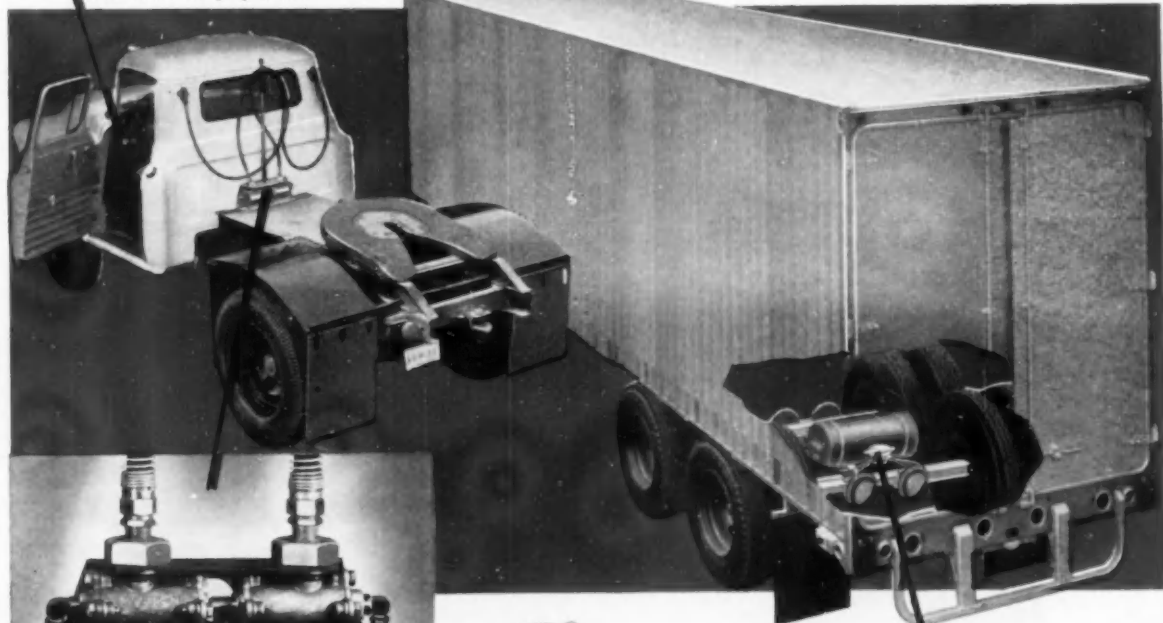
Midland's tractor-trailer braking system is designed for the ultimate in braking protection. With this new system (1) tractor protection is **AUTOMATIC**, so important in split-second emergencies; (2) valves are large-capacity, giving you faster, more positive action; (3) you have a *combination* manual and automatic dash control valve for *instantaneous* application and release of trailer brakes; (4) manual shut-off cocks are eliminated . . . Specify Midland Power Brakes for extra quality performance, more positive protection. Make it Midland, too, when replacing or modernizing the braking system on your present equipment. Your nearest Midland distributor is anxious to serve you. Just give him a call.

## THE MIDLAND STEEL PRODUCTS CO.

6660 MT. ELLIOTT AVENUE

DETROIT 11, MICHIGAN

Export Department: 38 Pearl Street, New York, N.Y.



Automatic shut-off valves eliminate hand-operated shut-off cocks and function as part of the Midland breakaway system to retain adequate tractor pressure for breakaway protection.



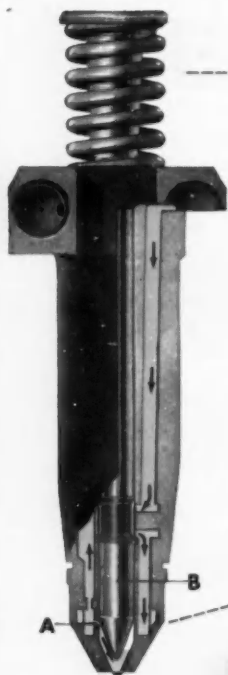
**GO** **MIDLAND**

**AND STOP**  
**SAFELY!**

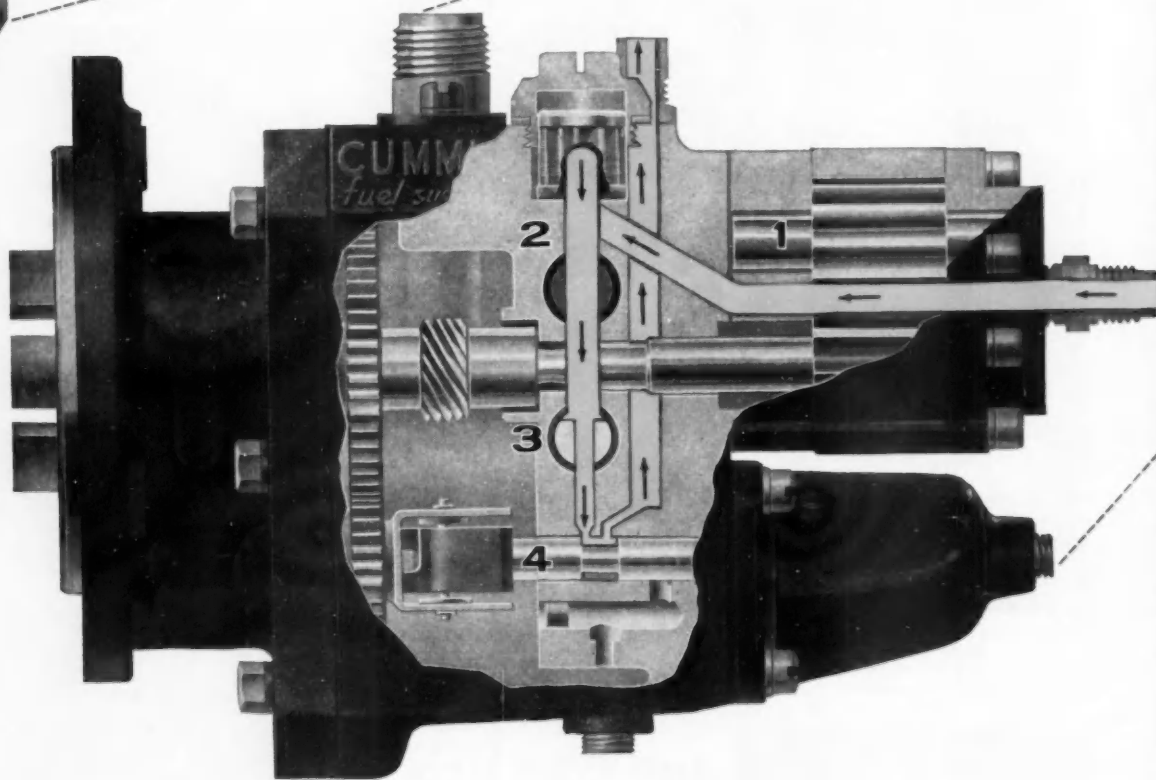
Midland's new air emergency relay valve meets the "no feed back" requirement. Designed to reduce application and release time. Safeguards against vehicle driveaway without sufficient air in the system.



# SIMPLICITY



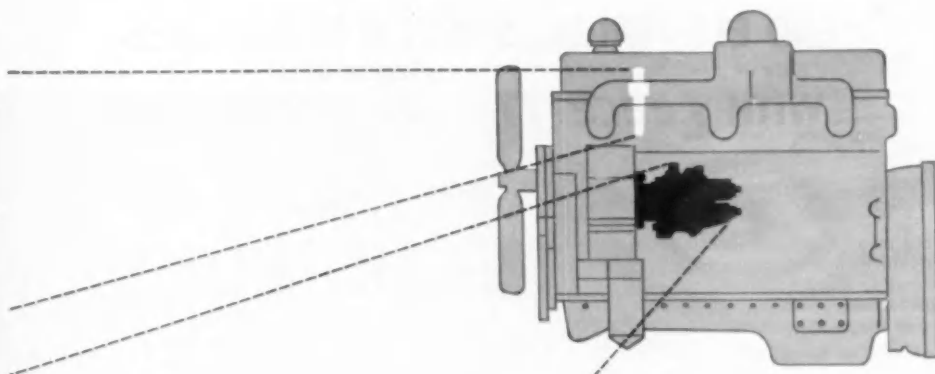
**INSIDE THE ENGINE** Cummins simple seven-part injector utilizes the Pressure-Time principle of fuel metering. Fuel is delivered from the PT pump under varying low pressures to (A) the fixed-size metering orifice. The engine camshaft establishes and controls the time interval during which (B) the injector plunger, the only moving part in the injector, meters and injects fuel.



**OUTSIDE THE ENGINE** Cummins PT pump, made of four simple assemblies, needs no timing adjustments. Fuel is drawn in by means of (1) a simple gear pump. Fuel continues through the strainer and the pres-

sure regulator (2) to the throttle (3) where pressure is varied in accordance with throttle settings. A flyball governor (4) controls idling and maximum engine speed.

# THAT SAVES



Cummins **PT**® Diesel fuel system has fewer parts and costs less to maintain than any other fuel system . . . gasoline or diesel!

System	No. of Parts	Average Maintenance Costs (based on 100,000 miles or 3600 hours of operation)
Cummins Diesel PT Fuel System	188	<b>\$76.10</b>
Average other diesel fuel systems	401	<b>\$155.00</b>
Average gasoline carburetion and ignition	450	<b>\$263.00</b>

PT conversion kits are available for all Cummins Diesels built since 1932. See your Cummins Distributor today.

**CUMMINS**

gives you the big plus

**MORE PROFIT**

Cummins Engine Company, Inc.  
Columbus, Indiana

I am interested in learning more about Cummins Diesels and the exclusive PT fuel system. Please send me, free, the following illustrated booklet(s).

\_\_\_\_\_ "Cummins PT fuel system"

\_\_\_\_\_ "Answers to Questions about Diesels"

\_\_\_\_\_ "More Profit with Cummins *TURBODIESEL* Engines"

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_





**Don't let freezing weather add to your troubles...**

## **END ELECTRICAL SYSTEM HEADACHES** *standard* **WITH Leece-Neville ALTERNATORS!**

Does freezing weather mean increased electrical system troubles on your vehicles in stop-start service? Now you can put an end to dead batteries, hard starting, poor engine performance and road failures due to prolonged idling or frequent restarting!

Replace the conventional or so-called "heavy-duty" dc generators in your fleet with Leece-Neville alternators. Because they produce ample charging current as soon as the engine starts and develop full output at slow traffic speeds, L-N alternators keep batteries at full charge all the time!

Leece-Neville alternators, with no commutator or heavy current-carrying brushes, keep maintenance costs low too. Expensive dc generator overhaul, including repair of field coils, armature and brush rigging, is eliminated. Complete overhaul of the L-N

alternator, easily performed in any shop after many thousands of miles of dependable service, requires only 5 small wearing parts costing less than \$8.00.

Best of all, L-N alternators cost less than so-called "heavy-duty" generators! One basic type unit fits all popular makes of trucks and passenger cars, with 6 or 12 volt systems. And, by using one standard alternator, present generator unit and spare parts inventory investment can be reduced sharply.

Find out how L-N alternators can get rid of your electrical system headaches—and save you money, too! Write us for the name of your Leece-Neville distributor today. The Leece-Neville Company, Cleveland 3, Ohio. *Distributors in principal cities... service stations everywhere.*

AA-4559-A

### **Leece-Neville Alternators Assure...**

**quick, sure starting in coldest weather, with plenty of battery power to crank today's higher compression engines**

**low cut-in to provide a high rate of charging current, even with engine idling**

**faster build-up of charging current to full rated output at low engine speeds—permits full use of all electrical accessories**

**full output at continuous high speeds without danger of damage to the alternator**

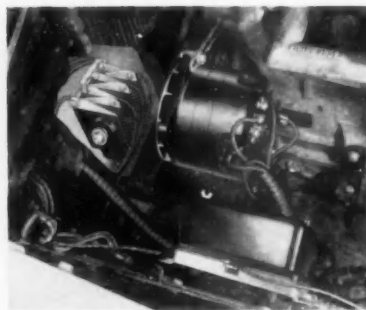
**constant uniform voltage regulation to protect the entire electrical system and battery**

**maintenance cost savings plus reduction of spare parts and spare battery inventories**

#### ***Trouble-Free 2-way Radio Operation***

no radio interference—constant voltage control increases radio efficiency—prolongs life of components

alternator provides enough current—with engine idling—to handle 2-way radio transmitting load



**Simple installation**—Leece-Neville alternators can be ordered as factory-installed original equipment on all popular makes of trucks and cars. Also, precision-engineered mounting kits permit quick, easy installation on vehicles now in your fleet.

**INVESTIGATE your Leece-Neville distributor's GUARANTEED PERFORMANCE PLAN.**

**Every L-N alternator will perform as claimed!**

**YOU CAN  
RELY ON**

**Leece-Neville**

Automotive Electrical Equipment Since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY



ALTERNATOR SYSTEMS



D C GENERATORS



REGULATORS



CRANKING MOTORS



SWITCHES



SMALL MOTORS



DAIRIES, BAKERIES



PACKAGE AND MAIL DELIVERY,  
LAUNDRIES, DRY CLEANERS, NEWSPAPERS

## In any type of service . . .

### MULTI-STOP

Frequent stops and prolonged idling of trucks equipped with conventional or so-called "heavy-duty" dc generators can pull batteries down . . . produce road failures . . . disrupt schedules . . . because, while truck

engine idles, these generators allow the battery to discharge. L-N alternators produce enough current, with the engine idling, to carry the vehicle's normal electrical load . . . prevent road calls due to electrical failures!



FLORISTS, GROCERY DELIVERY,  
PLANT CATERERS, EMERGENCY VEHICLES



TAXICABS, SUBURBAN POLICE,  
SALESMEN, EXECUTIVE AND  
FLEET CARS

### MULTI-START

Conventional or so-called "heavy-duty" dc generators cannot produce enough current to recharge the battery between starts on short runs . . . batteries go dead . . . delivery schedules are snarled.

L-N standard alternators deliver up to 60 amperes output at slow traffic speeds . . . restore the battery to full charge quickly . . . ready for a fast, sure start after the next stop!

AA 4000-B

**Leece-Neville** alternators  
eliminate electrical system  
troubles!

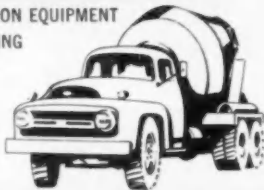


CARTAGE, CITY DELIVERY



FREIGHT PICK-UP AND DELIVERY

CONSTRUCTION EQUIPMENT  
AND BUILDING  
MATERIALS



UTILITIES, APPLIANCE SERVICE

If freezing weather means electrical troubles in your fleet, see your **Leece-Neville** distributor. He has the remedy—low-cost L-N alternators!

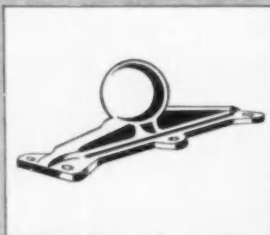
MADE ONLY BY  
HOLLAND HITCH CO.  
HOLLAND, MICH.



**THE LIGHTWEIGHT CHAMP THAT CAN'T BE KO'D**

**YOU'RE ON THE BALL  
WITH THE "3300"**

Cast Steel Plate rides on two Forged Steel Balls which are integral with Drop Forged Brackets, providing the greatest and smoothest amount of bearing area of all Fifth Wheels. These indestructible brackets are mounted directly to tractor frame; no mounting plate required.



**EASY DOES IT, MAC!**

You don't have to ram the King Pin into place; you just nudge it in gently and the exclusive Holland Hitch mechanical spring lock takes hold with the surest grip of any lock ever devised. So easy on your equipment and your load; stop those devastating wallops required by ordinary compression locks, and take the easy way with the Holland Hitch "3300".



# The Indestructible Holland "3300"

That's a mighty strong word — *indestructible* — but what it means is what the Holland Hitch "3300" has got — a DROP FORGED STEEL BRACKET that makes this the one and only Fifth Wheel having the ultimate in unbreakable strength! Standardize on the "3300" and you can forget all about maintenance and repair, for these costs have been engineered right out. What's more, you'll save on payload, for not only is the Holland Hitch "3300" the toughest Fifth Wheel ever made, but it is also the Light Weight Champ — weighing in at only 255 pounds! So, what more can you ask for? This is IT — the indestructible Fifth Wheel — the Lightweight Champ that can't be knocked out! You can have it on all your new truck tractors by simply asking for it — and you can have it on all your present tractors by making the replacement now, once and for all time. Better check with your Holland Hitch distributor right now.

**The ONLY Fifth Wheel With . . . . .**

# Drop-Forged Steel Bracket!

**The Leading Name in Fifth  
Wheels, Landing Gears, Pintle  
Hooks and Couplers, — and The  
Only Name That Means These  
Products Exclusively.**





**Quicker Starting,  
Better Performing**

**KILGORE**

*Flares*

*Provide*

**SAFETY, LIGHT, CONVENIENCE  
for Highway  
Night-Time Emergencies**

A pitch-black night . . . a heavily-traveled highway . . . a stalled, unlighted truck . . . a rapidly approaching car . . . all stage props for a serious, costly accident. But, with Kilgore Flares placed ahead, alongside and behind the truck, the oncoming motorist is aware of lurking danger.

Kilgore Automotive and Truck Flares perform in all kinds of weather. Faster starting . . . candle power substantially exceeds minimum requirements . . . convenient, sturdy wire stand or spike . . . plastic plug for greater rigidity. Equip your fleet with Kilgore Automotive and Truck Flares. See your Kilgore dealer.

*Kilgore, INC.*

INTERNATIONAL FLARE SIGNAL DIVISION  
WESTERVILLE, OHIO

## ARBA Road Show

Continued from Page 73

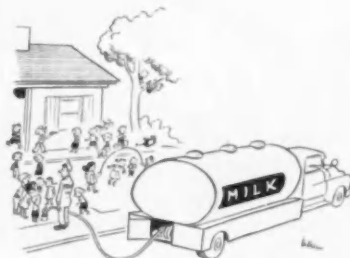
This Road Show will be especially timely in view of the tremendous road building program sparked by the Federal Highway Act, with its demand for the newest and most productive machines if best economy is to be obtained. Construction machinery has been increased in size, speed and capacity during this nine-year period, and visitors to the show will see what manufacturers have to announce for the future along the same lines.

The importance of the display of new equipment to the contractors, and to the officials from city, county and state highway departments, is pointed out by Louis W. Prentiss, executive vice-president of American Road Builder's Assn. "No other occasion except a Road Show provides roadbuilders with the opportunity to see such a wide selection of machines," he said.

Interest in roadbuilding equipment is at a high peak just now because of the national roadbuilding program, and the many smaller, long-delayed projects that are being launched simultaneously with it. Contractors bidding on these jobs are looking to their equipment and are keeping in mind the heavy work to be done. Kenneth Lindsay, executive vice-president of the Iowa Mfg. Co., observed recently, "The contractors who make the most out of the National Highway Program will be those who have learned how to manipulate equipment—how to pick the right machine for the job at hand, how to set up the most productive combinations."

END

Please Resume Reading Page 74



## THERE'S NO SUBSTITUTE for LUBER-FINER'S

**ENGINEERED  
PROTECTION**



**YES! IT'S WHAT'S  
INSIDE  
THAT COUNTS**

The Efficiency of  
Luber-finer's Exclusive  
Patented Process

**HAS NEVER  
BEEN EQUALLED!**

**USE ONLY GENUINE**

*Luber-finer*

**DIESELPAKS**



Only a Luber-finer Unit  
Plus a Genuine Luber-  
finer Pack can give the  
Exclusive Patented Fil-  
tering Process that has  
made Luber-finer The  
Standard of The Indus-  
try Since 1936!!



**THERE'S A LUBER-FINER MODEL  
FOR EVERY TYPE OF ENGINE—  
EVERY TYPE OF OIL!!**

**LUBER-FINER PACKS  
AVAILABLE**

### 1. REFINING PACK

Introduced to the public in 1935 for use with straight mineral oils, fuel oils, hydraulic oils, and inhibited industrial oils.

### 2. DIESELPACK

First made available in 1941, the DIESELPACK was primarily designed for use with H.D. detergent compounded oils and has also achieved outstanding results when used with fuel oils and straight mineral oils.

**DON'T BE MISLED  
BY PRICE ALONE!**

There is no substitute for DIESELPACK'S Patented Filtering Process for H.D. Compounded oils AT ANY PRICE!

The DIESELPACK cleans more oil faster—keeps it CLEAN longer—and gives more service and better engineered protection than ANY of the substitute filtering elements being offered for Luber-finer units.

**IT PAYS TO GET THE BEST!**

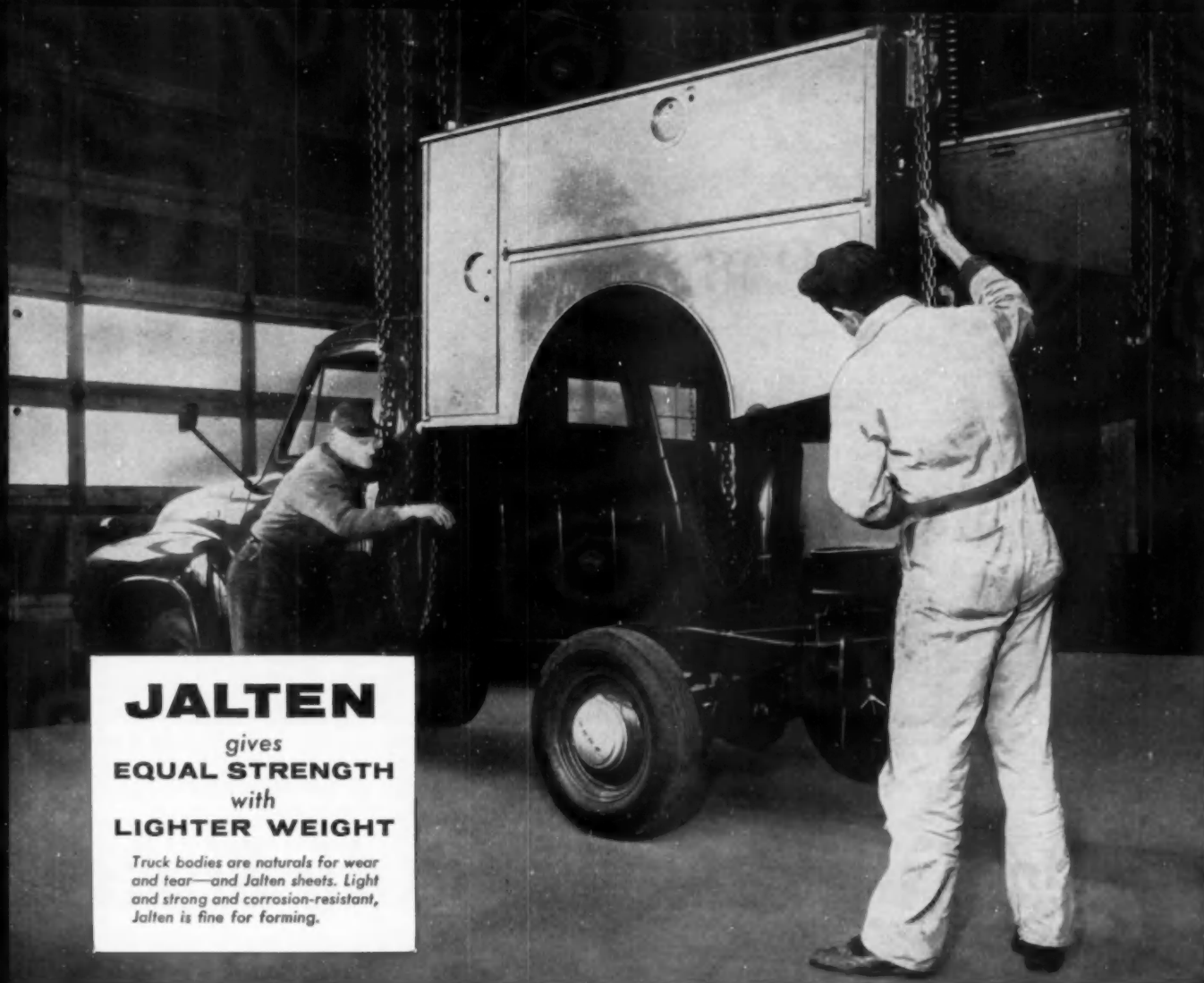
**STANDARD OF THE INDUSTRY  
SINCE 1936**

Luber-finer Units are Standard and Optional Equipment on America's Leading Diesel Trucks, Tractors, Stationary Engines.

Write for Complete Information to Dept. 13

**LUBER-FINER, INC.**  
2514 S. Grand Ave., Los Angeles 7





**JALTEN**  
gives  
**EQUAL STRENGTH**  
with  
**LIGHTER WEIGHT**

*Truck bodies are naturals for wear and tear—and Jalten sheets. Light and strong and corrosion-resistant, Jalten is fine for forming.*

## Low alloy, high strength Jalten offers good formability coupled with excellent corrosion and abrasion resistance

Jalten's high strength permits high design loads. It also permits a reduction in section when used to replace mild steels. Usually the reduction amounts to two gages affording a weight savings of approximately 25 per cent. Thus, dead weight can be eliminated—resulting in increased carrying capacity. Also, it is easily welded.

Jalten is furnished in four grades:

- No. 1**—possesses high strength, good formability and fabricating qualities—good resistance to low temperature impact.
- No. 2**—offers high strength, moderate formability—improved resistance to atmospheric corrosion.

**No. 3**—gives high strength—improved resistance to abrasion.

**No. 4**—provides superior formability and surface quality for bumper stock applications requiring plating.

Jalten Steels are available as sheets, strip, plates, structurals, bars and small shape sections.



**SEND FOR THIS NEW BOOK:**

Chemical properties of Jalten  
Mechanical properties of Jalten  
Jalten equivalents  
Jalten application data



**Jones & Laughlin**  
STEEL CORPORATION • PITTSBURGH



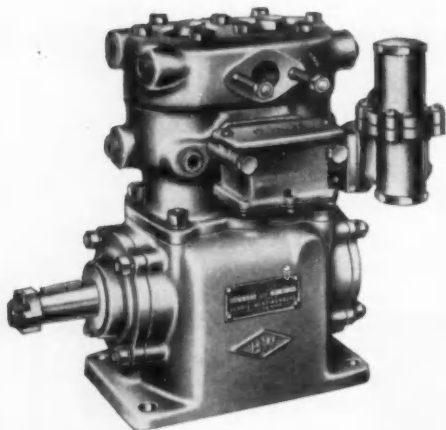
Mr. Milton J. Zabarsky, Treasurer



Mr. James Ambrose, Superintendent of Maintenance

IN THE FRONT OFFICE . . . MAINTENANCE SHOP . . . AND ON THE HIGHWAY

# **Bendix-Westinghouse Air Brakes** **and efficiency they give**



Bendix-Westinghouse has produced over 1,500,000 compressors during the past 25 years—far more than any other manufacturer. This experience is your assurance of excellence. TU-FLO 400 model above is designed for the medium and heavyweight classes. Other Bendix-Westinghouse compressors are for the light and extra-heavy-duty classes.

From one truck in 1921 to nearly 400 power units and 350 trailers today . . . that's the story of St. Johnsbury Trucking Company, one of the best-known carriers serving New England, New York and New Jersey!

Mr. Milton J. Zabarsky, the firm's treasurer, says, "Like most other successful fleet operators, we credit our thirty-five years of progress to our policy of providing fast, efficient, dependable service. To carry out this policy, we must be able to rely on all our equipment, so we make it a point to buy the best. Naturally, when it comes to air brakes, we always specify Bendix-Westinghouse!"

*More trucks travel more miles with*



Mr. Warren Libby, Driver

# can give you the same economy

## ST. JOHNSBURY TRUCKING CO., INC.

To see why St. Johnsbury Trucking Company is sold on Bendix-Westinghouse Air Brakes, take a look at these facts taken from the company records:

St. Johnsbury's Bendix-Westinghouse Air Brake equipped rigs roll up an annual total of *over 13,800,000 miles* at an actual compressor-operating cost of *only \$.0001 per mile* . . . they maintain an average brake lining life of *over 80,000 miles*, while stopping loads which average *30,000 pounds per unit* . . . they travel an average of *200,000 miles between compressor overhauls* . . . and they *increase driver confidence and efficiency, resulting in better trip speeds with greater safety.*

While such a record is outstanding, it is not unusual. Literally thousands of the nation's truck operators have experienced similarly profitable and dependable results with Bendix-Westinghouse Air Brakes. Why not follow their lead—specify Bendix-Westinghouse on your next new truck order . . . or consult your local Bendix-Westinghouse distributor about converting your present vehicles to air with field installation kits. Either way, you'll join St. Johnsbury Trucking Company and all the others in agreeing that Bendix-Westinghouse Air Brakes are truly tops in stops!

**Bendix-Westinghouse than with all other air brakes combined!**

***Bendix-Westinghouse***



**AIR BRAKES**

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY • General Offices and Factory—Etruria, Ohio • Branches—Berkeley, Calif.; Oklahoma City, Okla.

# Solvent Detergents Speed Parts Cleaning

Continued from Page 79

that the area in which the solvent tank stands is well ventilated. (For an idea of what's available in cleaning tanks, see January, 1954, page 94.)

Solvent detergents are usually applied by tank immersion, although some of them may also be

sprayed on parts. Selection of method will generally depend upon size of parts, amount and kind of soil.

## The Cleaning Mixture

In a typical small parts cleaning system, a mixture of one part sol-

vent detergent to five parts kerosene is used, and is compounded to enable parts to be rinsed with water. After cleaning, parts are sometimes given a bright dip in a solution containing 40 oz of chromic acid flakes and four ounces of sulphuric acid per gallon.

Carburetors, fuel pumps, and automatic transmission parts, which are often coated with carbon and lacquer, as well as grease, may be cleaned in a two-phase solvent material. Parts are immersed in the body of the solvent, allowed to soak for an average of 30 min, then rinsed with pressure water or a hydrocarbon.

## Oil Filter Cleaning

Results of using solvent detergents in the cleaning tank are often impressive. For example, a large fleet operator used to clean oil filter cartridges in a 10-gal, air-agitated tank. The cartridges would soak anywhere from two hours to overnight, and at best the cleaning was just about satisfactory. He changed the tank solution over to a solvent detergent, mixed 1 to 3 with distillate, and soaked the cartridges for 30 min. Results were very satisfactory, and the cost of charging the tank was reduced by more than 70 per cent.

The solvent detergent used in this case was one of the newest, and most versatile. It has the unique virtue of being effective in either water or petroleum distillate solution, depending on the job it is called upon to do.

## Valve Lifter Cleaning

Another new solvent material has been used with a great deal of success to remove varnish from hydraulic valve lifter assemblies. For this purpose (which is similar to paint stripping), the material is used straight at room temperature. While the solvent materials formerly used merely softened the varnish, which then had to be scraped off, the solvent detergent used in the tank soaks the assemblies clean in half an hour.

END

Please Resume Reading Page 80

"YOU CAN BE A  
**SPECIALIST**  
IN THE REPAIR  
AND ADJUSTMENT OF  
AUTOMATIC TRANSMISSIONS  
AT A MINIMUM OF COST AND TIME"

FRANK O. BREGNARD  
President, AMI



AMI (Auto Mechanics Institute) is the leading national organization in the field of automotive technical guidance, offering special instructions... through your jobber... to advanced mechanics on automatic transmissions and other critical parts of modern automobiles. Important benefits derived from the advanced courses are:

- You become a qualified expert in a particular new phase of auto repair and maintenance.
- More business from "word of mouth" advertising by satisfied customers.
- More profit for your garage or shop through contacts with new customers.



Bonney is the *only* AMI officially approved line of automatic transmission tools. Bonney multi-purpose tools eliminate the extras... give you a complete automatic transmission tool department... with a minimum investment.

Write for information.



BONNEY FORCE & TOOL WORKS • ALLIANCE • OHIO





## **"Costs overwhelmingly in favor of Diamond T... now converting our entire fleet"**

**W**HY? ANO's president T. S. Johnson tells you. "The results of our exhaustive, six-month study of equipment and maintenance costs were overwhelmingly in favor of our twelve Diamond T's. Their standout performance has forced us to make a change. *We are now converting our entire fleet of eighty over-the-road trucks to these Diamond T Model 830's.*"

"We are getting better than five miles per gallon and the 830's operate between 120,000 and 140,000 miles before we have to go into the engine. Our overall down time and maintenance cost is way below any other truck of like capacity in the fleet we are converting."

ANO—Atlanta-New Orleans Motor Freight Co.—is an economy-minded concern with a skyrocketing postwar growth. On a strict cost comparison, in a multi-city operation, they have proved Diamond T best.

### *Diamond T best for you*

Your operation may not be similar to ANO. But every Diamond T is "custom-built"—to match your particular hauling needs. There's a model for every type of service from two tons up: on the highway or off; truck or tractor; gas or diesel power; conventional or Diamond T Tilt-Cab models. See your Diamond T dealer or write Diamond T Motor Car Co., Chicago 23, Illinois.

# **DIAMOND T TRUCKS**

*Established 1905*



**The Diamond  
is for Quality**



# "SOLEX<sup>®</sup> makes my job easier and safer,"

says E. B. Medley,

holder of a 20-year safe-driving award

*Give your drivers  
this added comfort  
and safety!*



Mr. Medley averages better than 90,000 miles a year for East Texas Motor Freight Lines, Inc., Dallas, Texas. He is fast approaching the two-million-mile mark and is the holder of a 20-year safe-driving award. Talk with this truck driver about fatigue-reducing factors and safety, and you're talking with an expert.

Here's what he says about Solex Safety Glass: "I've driven in cabs with clear glass and it gets pretty wearisome. You come up over a hill

and the sun hits you square in the eyes. You tense up and squint. Sometimes you wonder if your eyes can adjust to it. It's a real hazard.

"With Solex Safety Glass it's a different story. Solex keeps out a lot of glare and heat. I get back off a run feeling more rested than I used to. I feel safer driving. Solex, you can bet, has helped me get my 20-year safe-driving award."

Specify Solex Safety Glass, and you give your drivers added comfort and safety. It pays to use Solex

in new equipment and as a replacement in your present trucks. Solex is available in the well-known types of Pittsburgh Safety Glass—Duplate<sup>®</sup> and Duolite<sup>®</sup>—as well as in Herculite<sup>®</sup> and conventional plate glass.

For more information on Solex, write to the Pittsburgh Plate Glass Company, Room 7132, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pennsylvania.

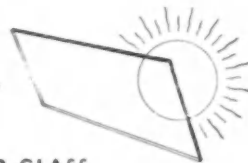
**SOLEX<sup>®</sup>** "the best glass under the sun!"



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

**PITTSBURGH PLATE GLASS COMPANY**

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



## Bus Painted for Advertising

**P**AINTING AN entire bus or the side of a bus with advertising is by no means a new idea. It has been done in many cities across the country and has brought considerable revenue to public and private bus operators.

However, designing a bus side specifically for advertising is a new and unique venture.

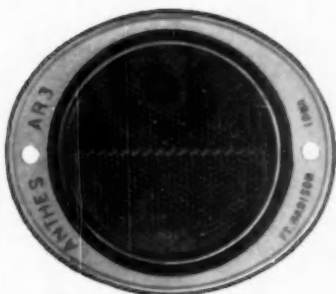
Fielder, Sorenson & Davis, the transit advertising agency which works with San Francisco's Public Utilities Commission, operators of the municipal transportation system, employed Walter Landor & Associates, San Francisco Industrial design firm, to re-design the old paint scheme (upper photo) on the street side of San Francisco's new Mack buses.

### Bus-Side Ad

"The objective," explains E. B. Sorenson, a partner in the agency, "was to create a larger space for advertising, which would present a pleasing and a harmonious appearance on the bus side." The final design developed by the Landor organization and approved by the Public Utilities Commission is illustrated in the lower photo.

The entire side of the bus—10 x 35 ft—forms the background for the advertising but the copy area is limited to 4 x 18 ft. The remaining space is framed or white space for the advertising which flows naturally into the over-all design so that the bus appears to be moving even when it is standing still. This space on the street side of the 100 new Mack buses will be offered to a limited number of advertisers in San Francisco.

The space sells for \$70 per month on a 12-month contract and the price includes \$20 a month to cover the cost of the first painting and maintenance. One or two additional paints per year will be permitted at actual painting cost, to be paid by the advertiser.



Aluminum & Lucite  
Reflector No. AR-3



Clearance  
Life No. 612



Stop & Tail  
Life No. 554



Streamlined Cab  
Life No. 666

ANTHES LIGHTS FOR FRONT, SIDE AND REAR

ANTHES REFLECTORS FOR FRONT, SIDE AND REAR

THE FIRST LINE OF SAFETY

# Anthes



ANTHES FORCE OILER COMPANY • FORT MADISON, IOWA

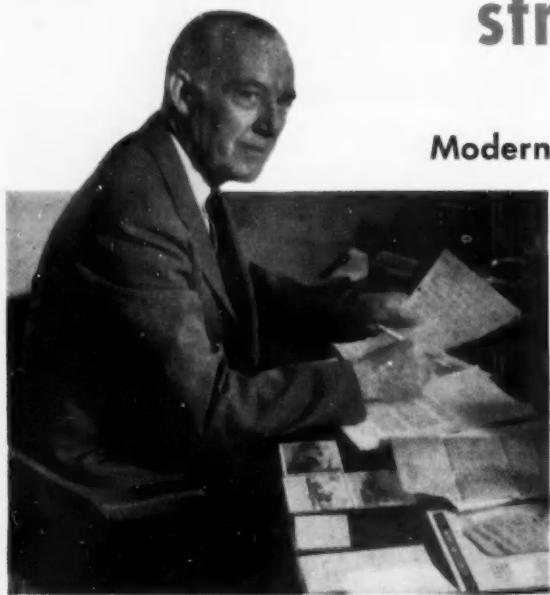
Steno Lou: "My boyfriend reminds me of a clock."

Steno Sue: "Why? Because he's always right up to the minute?"

Steno Lou: "No. Because his hands go around my waist so quickly they alarm me."

... and proud to serve  
the safest drivers on the road!

# **Lincoln** FLEET-ENGINEERED LUBE stretch time between



Howard M. Parks, National Superintendent of Maintenance for Complete Auto Transit, Inc., plans and supervises company's maintenance programs.

Company delivered 691,000 new cars and trucks in 1955; conducts its tests under actual operating conditions. Results, indicating vital importance of proper lubrication, are applicable to both large and small fleet operations.

Modern automatic equipment is heart of well-planned facilities that cut costs, keep fleet profitably on-the-road

Operating costs are being substantially lowered by lengthening the time interval—safely—between preventive maintenance inspections. The Complete Auto Transit, Inc., of Detroit, with operating branches in four states and 94 million miles traveled in 1955, has already made great strides toward this goal.

These facilities in the St. Louis Terminal were custom-designed by Complete Auto Transit, Inc. to suit their needs perfectly. They illustrate how modern automatic Lincoln Fleet-Engineered Lubricating Equipment performs a key function in the company's intensive, closely-controlled maintenance program.

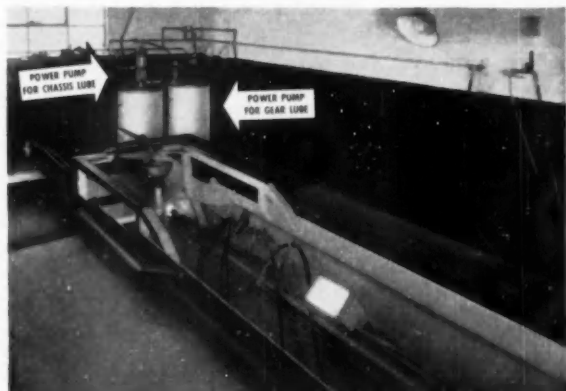
After completing exhaustive over-the-road tests, Complete Auto Transit has successfully extended chassis lube intervals to 6,000 miles. Tests continue on lengthening the interval even more—with emphasis always on thorough inspection and efficient, dependable lubrication.



## **Lincoln**

THE MOST TRUSTWORTHY NAME  
IN LUBRICATING EQUIPMENT

# EQUIPMENT helps Complete Auto Transit, Inc. Preventive Maintenance Inspections



Versatility, adaptability of Lincoln power-operated automatic Lubricating Equipment is coupled with special type lube pits and ramps designed by Mr. Parks.



The company has found that the essential considerations in cost-cutting preventive maintenance are: adequate, well-lighted ramps, properly trained men—and automatic lubricating equipment. Terminal averages 86 grease jobs every 24 hours.

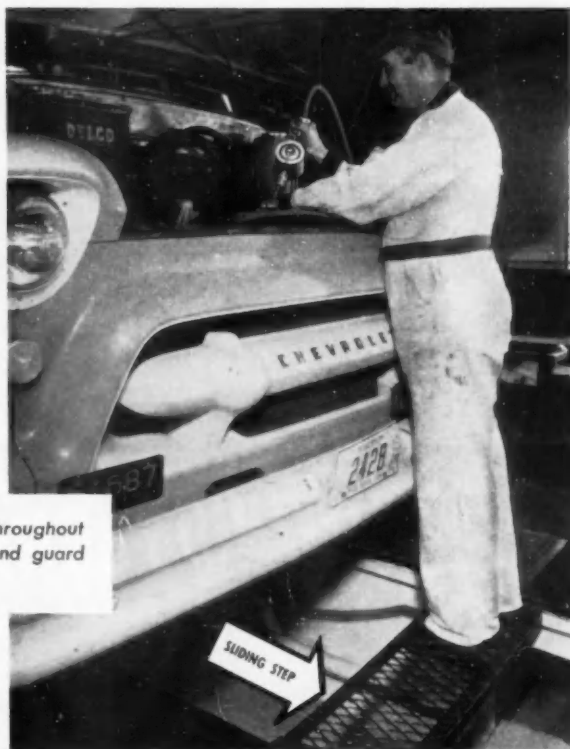


Excellent pit lighting permits careful, efficient undercarriage inspection and lubrication. Front wheel bearings, king pin wear, steering looseness can be examined without jacks—front axle slides into position as unit is driven over pit.

Lincoln Fleet-Engineered Lubricating Equipment, used throughout installation, enables men to do expert lubricating job and guard against damage or excessive wear to chassis parts.

**Lincoln** has the complete line of modern, efficient lubrication equipment, including Multi-Luber® Power Lubrication. Send for newest Lincoln Catalog No. 56 and Bulletin No. 530.

\*Trade Name Registered



**LINCOLN ENGINEERING COMPANY** Division of The McNeil Machine & Engineering Co.  
5703 Natural Bridge Ave., St. Louis 20, Mo.

# Fuel Injection Gets Toe Hold

Continued from page 84

tions. Holley says price may be around \$100.

But price is a relative thing. In the long run it depends largely upon mass production methods. At present writing, there is no volume production—it may be considered as experimental high cost

production. Lower costs can be expected only after demand has been established. That prospect appears remote at the moment.

## For Trucks?

It may seem curious that in all the years that fuel injection has

been discussed nothing has been said about its applications to heavy duty vehicles. Still more curious when you consider that a commercial vehicle can capitalize on even small gains in fuel economy much more effectively than any passenger car can. To put it another way, the heavy duty jobs might justify the high cost of fuel injection and pay off in savings from fuel costs.

What are the advantages of fuel injection? For one thing, it eliminates the problem of mixture distribution among the six or eight cylinders of an engine. It can do this because the fuel is metered directly to each individual cylinder without vaporizing and pre-mixing with air.

Another advantage is that the incoming charge of air does not require preheating and as a result volumetric efficiency is improved. Preheating is not required for the simple reason that it is no longer necessary to vaporize the gasoline.

## Advantages of FI


Producers of these devices claim an increase in horsepower as well as a bigger gain in torque. These claims mean more on trucks and buses than they do on passenger cars. The latter already have more performance than they can possibly use, except for sports cars and stock cars intended for racing, whereas a heavy duty vehicle could profit greatly by any increases in output which do not increase the size of the engine.

Here are some other advantages claimed by the suppliers: better overall fuel economy, elimination of throttle icing, reduced stalling tendency on sharp turns or steep grades or quick stops, and fuel cut-off during deceleration.

At the present writing suppliers claim fuel economy of the order of 10 per cent. This saving would be important to a fleet operator whose vehicles are on the road practically every hour of the day. It could pay for fuel injection even at the high price of the system with experimental production.

What then is the reason why fuel injection has not been offered to the fleet operators? Frankly, we can only theorize.

(TURN TO PAGE 156, PLEASE)

 <p><b>INCREASE GAS MILEAGE</b></p>	 <p><b>REDUCE TRUCK MAINTENANCE</b></p>
 <p><b>LENGTHEN TIRE LIFE</b></p>	 <p><b>GUARD AGAINST ACCIDENTS</b></p>

By Equipping Your Fleet with  
**HANDY GOVERNORS**



7616



**KING-SEELEY  
CORPORATION**

ANN ARBOR, MICHIGAN

WORLD'S LARGEST MANUFACTURER OF AUTOMOTIVE GOVERNORS





Photo courtesy Williamsen Body Equipment Co., Ogden, Utah.

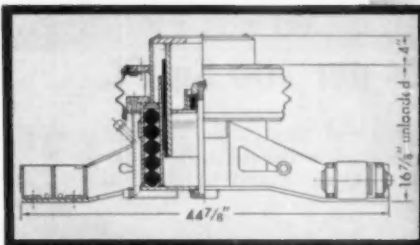
# Uranium trucker discovers hidden riches...

## does it with SMITHway "5th Wheel"

OGDEN, UTAH — A 400-pound payload bonus on every trip adds up to a real "high-profit" claim over thousands of miles—for uranium-ore-hauling G & C Truck Lines. They "struck it rich" with the smooth-operating SMITHway "5th Wheel" . . . enjoy additional benefits of high-strength and durability in rough going — on and off hard surfaces.

### Successful Experience

G & C Truck Line owner, Mr. Grant S. Nielson, and Mr. L. C. Williamsen, of the Williamsen Body and Equipment Company report: "Our interest was initially aroused by the 400-pound weight reduction possible using SMITHway "5th Wheel" installed in conjunction with our lightweight aluminum trailer bodies. We believe these truck-trailer combinations have the greatest legal high-way payload available anywhere."



### Weight-Savings, Strength

SMITHway's ingeniously formed and welded high-strength steel construction saves G & C 400 pounds over heavy casting, leaf spring types of suspensions. Giant-size synthetic O-rings (shown in drawing) immersed in oil absorb vertical movement and road shocks. Synthetic rubber jacket absorbs horizontal shock. Other movements are dampened between these two assemblies, with smaller O-rings cushioning rebound shock. For further information on this remarkable SMITHway "5th Wheel," write for Bulletin T-1 and the name of your nearest authorized installer.

## The only "5th Wheel" that saves money three ways...

• **LIGHTWEIGHT** — Synthetic rubber O-rings replace heavy castings, leaf springs — save 400 pounds per trailer.

• **BETTER PERFORMANCE** — Free from sway and whip. Veteran drivers say SMITHway "5th Wheel" tracks well, follows better, is easier to handle.

• **LOWER UPKEEP** — No springs to break — no roller or ball bearings to wear out. Simply installed, easily accessible. Full reservoir maintains complete lubrication.

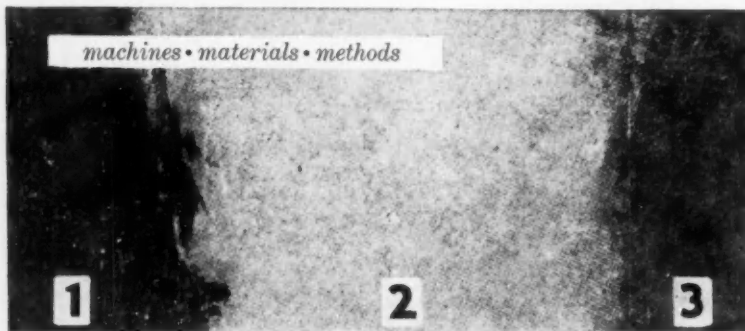
Through research  a better way

**A.O. Smith**  
CORPORATION

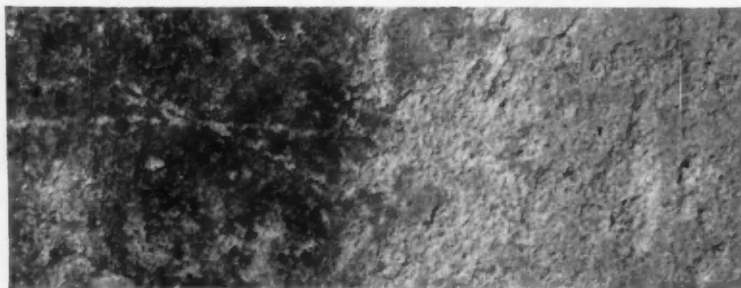
TRUCK AND TRAILER PRODUCTS

5715 Smithway Street • Los Angeles 22, California

"Look for SMITHway on the highway"



1. Cement floor caked with grease and grime. 2. Cleaned with Magnus Cement Cleaner. 3. Cleaned with alkali.



**BEFORE**

**AFTER**

Cement floor in bad condition before and after cleaning with Magnus Cement Cleaner. Earlier consistent use of Magnus would have greatly retarded the severe disintegration of the cement surface.

## You Can Have Clean Cement Floors For Less Than 5¢ per 100 Sq. Ft.

These unretouched photos prove that with Magnus Cement Cleaner, your cement floors and driveways can be cleaned of greasy, oily dirt easily and quickly at very low cost.



There are two Magnus Cement Cleaners . . . Magnus 92 PR for cleaning of neglected, hard-to-clean floors; Magnus 92 P for normally dirty floors. Both cleaners have the lowest use cost ratio—5¢ per 100 square feet of floor area. What is more, Magnus Cement Cleaners are non-flammable, non-poisonous and do a more efficient cleaning job. Order a drum of either Magnus cleaner on the 30-day trial basis, or write to Magnus, 38 South Ave., Garwood, N. J., for the Magnus Cement Cleaner Bulletin 22.



—a world-wide organization specializing in cleaning and protection of all surfaces.

**AUTOMOTIVE DIVISION**

**MAGNUS CHEMICAL CO., INC.**

## Fuel Injection

Continued from page 154

### The Truck Problem

In the first place, the cost of development is so high that each supplier must aim at the high volume of production associated with passenger cars. Only volume in the hundreds of thousands or millions of units can justify the engineering expense as well as the cost of tooling for regular production.

If even a smaller volume is established for passenger cars, there would be more prospect of tailoring equipment for trucks as well.

Unfortunately, there is more complication involved. For one thing, fuel injection, unlike the carburetor, must be tailored to each individual engine. Before the special advantages listed earlier can be realized, the engine must have an entirely new system of manifolding suited to fuel injection. Without this, the advantages will not be realized at all.

When you consider the enormous variety of power plants employed in commercial vehicles, you can see that confusion is compounded many times over. On a passenger car you deal with only one engine that is built by the hundreds of thousands. On a truck you deal with large numbers of engines built in relatively small volume.

### V-8 Engines First?

It seems to us that the logical sequence of events would be to expect commercial vehicle fuel injection to come first on the V-8 engines that come from the passenger car divisions of companies building trucks. That would be feasible on Chevrolet, Ford, Dodge and GMC. Even then, the move would be confined to those engines that have had fuel injection tailored for the passenger car engine version.

If that could be the first step, then it might be feasible later to introduce fuel injection on V-8's made by truck producers and truck engine builders.

**END**

Please Resume Reading Page 86



## Truck breakdown? (Get The Hertz Idea)

A truck breakdown at the busiest time of year! What happens? Deliveries don't get out on time. Orders pile up. *Customers complain.* Sound familiar? Well, it doesn't have to if you rent the extra truck you need from Hertz. Just pick up the phone, and it's yours—fast!

That's The Hertz Idea. Just send your driver to Hertz with proper

driver's license and identification. We'll give him the keys to a clean, modern Chevrolet or other sturdy truck. Rent it only as long as you need—by the hour, day or longer.

Low rates, too. Hertz includes all gasoline, oil and proper insurance. In Dayton, Ohio, for instance, a 1½-ton van truck costs only \$10.00 for 12 hours, plus 10 cents a

mile (lower by the week). Cost for a 30-mile trip? Just \$13.00! Rates vary slightly in different cities.

You can't miss getting fast, dependable service. So call your local Hertz office. We're listed under "Hertz" in alphabetical phone books everywhere. Hertz Truck Rental, 218 South Wabash Avenue, Chicago 4, Illinois.

*Hertz rents Chevrolets or other sturdy trucks in ½-, 1- or 2-ton sizes with pick-up, panel, van or stake bodies.*



*Most experienced...by far*

**HERTZ**  
Truck rental

# Better Electrical Equipment Ahead

Continued from page 75

especially if high loads occur at low engine speeds. Its ability to give high charging rates at engine idle speeds and its freedom from contamination difficulties have contributed to its growing use.

Force-cooled generators have recently been developed to over-

come dirt conditions which are too severe for ventilated generators. The new units are sealed against dirt and other deteriorating conditions, have about 50 per cent higher output than the enclosed, non-ventilated types.

For buses of the future, Bertsche

looks for generators with peak outputs of about 200 amps, with more than half of this output available at engine idle speed. Size and weight can be increased only slightly, he said, and these conditions will impose severe cooling problems. Other predictions: service life between overhauls must equal that of the engine, preferably without inspection or lubrication; for adequate cooling and protection from cleaning compounds it will be enclosed like a splash-proof industrial motor, with cooling air ducted from outside the engine compartment.

Conventional brush-type, direct current machines do not appear applicable to this type of service, Bertsche said, so he expects them to be replaced by alternators. The alternator will be controlled by a static voltage regulator which will give very close control and will require little or no service.

## Voltage Regulators

Voltage regulators are the most troublesome of all electrical system components, according to Bertsche. But heavy duty regulators of the vibrating and carbon pile type will now operate up to 500,000 miles without repair, according to Hartzell, who blamed most of their repair needs on failures in other parts of the circuit.

Regulators are now available which are sealed tightly enough to prevent entrance of water and oil vapors. This is an important improvement since contact point wear greatly increases in the presence of high humidity and oil or other hydrocarbon vapors.

While the main purpose of a regulator with two sets of contacts is to handle the higher field current of special purpose generators, this unit can also be used with standard generators to extend contact life. A combination of gold and platinum contacts gives the best life in this type of regulator.

Bertsche described a new type of voltage regulator which has been recently developed for coach use. It is an alternating current device which controls the field current by purely electrical means. It is a purely static device, employs no springs, bimetal hinges or bear-

(TURN TO PAGE 160, PLEASE)



### Mythical Paul Bunyan

## THE STRENGTH AND ENDURANCE OF THE BARTLETT 5th WHEEL IS NO MYTH

**New Piggy-Back Model Spotting 5th Wheel With Latest Added Improvements**

- New long forks to make easy pick-up alignment and over-ride
- New 4 bearing hinge 5th wheel — no sideways
- New air chamber to eliminate diaphragm replacements
- New jaw safety lock — un-breakable
- New unit designed to reduce repairs and lubrication

**Weights 1150 lbs. — upper fifth wheel so reinforced to double life expectancy — especially where rough treatment is common. Hand grease gun furnished.**

**14" & 24" Lifting Heights**  
**Reinforced to Carry Any Weights with Little or No Service**  
**Less Parts to Lubricate**  
**Pays for Itself by Labor Saving in 90 Days**  
**Saves Repairs to Trailers**

**AMONG THE MANY USERS**

Campbell "66" Express	Gordon's Transport, Inc.	Highhawk's Frit. Service
City of Chicago	Edward Hines Lumber Company	Olean Transp. Company
Safeway Stores	Haber & Huber	Pacific Intermountain Exp.
Consolidated Freight Company	Illinois California Express	Pennsylvania Truck Lines
Denver Chicago Trucking Company	Interstate Motor Frit. System	The Rail Trailer Company
Dakota Transfer Company	The Kroger Company	Saginaw Transfer Co.
Four Motor Transfer Co.	Oscar Mayer & Company	Southern Pacific Transp. Co.
Freightliner Corporation	Mid-States Frit. Lines	Spector Motor Service
Fruit Belt Motor Service	National Mamas	United States Army & Navy
Gateway Transp. Company	National Tea Company	The Willott Company



**ADAPTER TO FIT FULL AUTOMATICS**

**CONTROLS • VACUUM OR AIR OPERATED**  
**IT CAN BE INSTALLED BY A LOCAL DEALER IN YOUR CITY OR IN YOUR OWN SHOP**  
**PRINTS FURNISHED FOR INSTALLATION**

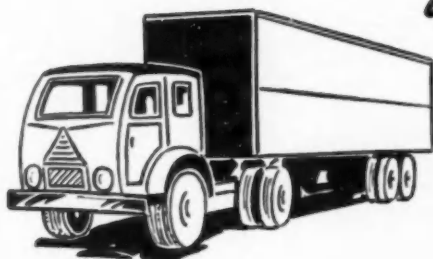
**BARTLETT TRAILER CORPORATION**  
 3080 ARCHER AVE. • CORNER OF ASHLAND • CHICAGO 8 • VIRGINIA 7-1140



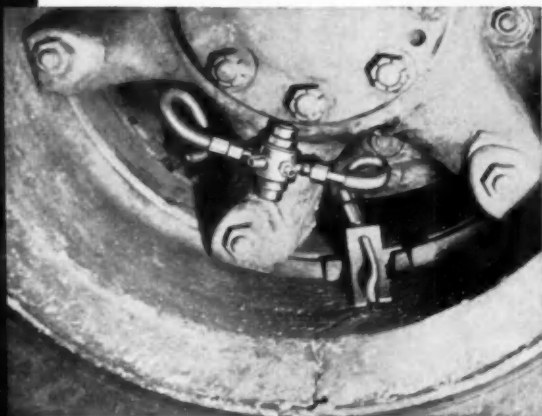
# *the* **CARLAN VALVE**

for DUAL TIRES

*Guarantees . . .*




- SAFER DRIVING CONDITIONS
- MORE MILEAGE ON ALL DUALS
- REDUCED COSTLY ROAD SERVICE
- BETTER AND SAFER RECAPS
- UNIFORM LOAD DISTRIBUTION
- UNIFORM WEAR
- MORE TRACTION FOR BETTER BRAKING

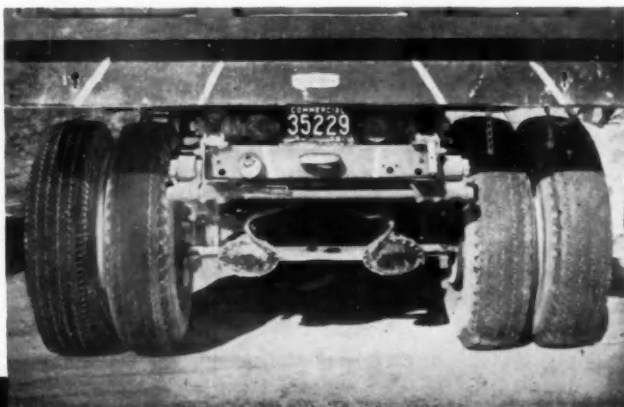


The photo on the left shows the application of the Carlan Valve and also shows safety clip provided to prevent valve stem from dropping into casing. The Carlan Valve is designed so that if either of the 2 connecting hoses becomes severed, or either tire goes flat, operation automatically ceases with no loss of air. These valves are pre-adjusted to any desired operating pressures. The valve requires no maintenance, it's self contained and is always in operation. It has two checking stations so as to determine pressure in each tire.

The photo at right shows a pair of duals with uneven wear, this is the result of running without the Carlan Valve. The other pair shows uniform wear with Carlan Valve application.

The application of the Carlan Valve speeds up tire checking methods without guessing. When ordering please state your operating pressures.

**SEE YOUR LOCAL  
DISTRIBUTOR OR** 



SEND FOR CATALOG SHEET

**CARLAN** INSTRUMENTS COMPANY INCORPORATED  
1375 PARK AVE. • CRANSTON 9, RHODE ISLAND • TEMPLE 1-4906



## Electrical Equipment

Continued from page 158

ings. It has no contact points, carbon stacks or other wearing parts. It is not affected by shock, vibration or temperature, and has only a slight voltage change between no load and full load. One simple adjustment will retain its setting indefinitely so that periodic checks

are not required. If an adjustment is ever necessary, it can be made under conditions existing at the time with full assurance that there will be a negligible change in voltage under all other conditions.

### Brighter Buses

Looking five years ahead, Bertsche saw heavy transit coaches with an exterior lighting system consisting of four head lamps and the usual corner markers, with perhaps

two additional amber side markers; the conventional identification lamps; front, side and rear directional signals; together with two tail lamps and two stop lamps. These will have improved photometric characteristics, some may use larger bulbs and they will be mechanically improved to reduce the time needed to replace bulbs.

He also forecast:

- Interior and destination sign lighting will be provided by a simplified fluorescent system. While some previous fluorescent systems were unsatisfactory, one new system, and perhaps others, has been developed which is low in cost, has instantaneous starting, constant light output at any engine speed, simple ballasts and no ballast lamps. Tube life is good and efficiency has been substantially improved.

- The driver's instrument panel will contain an air gage and an electric speedometer which is different from ones now in use. Tell-tale lights of an enunciator system will warn the driver of unsafe operating conditions.

- The coach will be equipped with an efficient automatic heating and ventilating system which will be one of the major consumers of electric power. All motors will be of high grade construction with sealed ball bearings and will require little attention and no lubrication for long periods of time.

- Some form of passenger entertainment such as tape players or radios, neither containing vacuum tubes, will be provided. Many coaches will use public address systems equipped with static amplifiers which use neither transistors nor vacuum tubes. Television may also be used.

- Lavatories will be quite common and some form of food service will be provided. This may take a form similar to that used by the air lines or be done by automatic dispensing machines. In either case electrical refrigerating and heating units will be required. These will probably be adaptations of 60 cycle commercial units.

- The primary source of current will be an engine driven alternator.

END

Please Resume Reading Page 76



## Ice or Snow? ... HYDRO-TRAC assures "keep-rolling" traction!

Featuring the amazing weight transfer mechanism, Truckstell's Hydro-Trac Suspension lets the driver shift weight to his driving axle... giving him maximum traction when he hits ice or snow and other bad driving conditions. Push-button control is from the cab.

Hydro-Trac can be used as trailing or pusher. Compared to dual-drive tandems, it costs less, weighs

less and takes far less maintenance.

With Hydro-Trac you have 50-50 axle loading for maximum payload. When deadheading, the 3rd axle is carried completely free of the road... increasing tire and gasoline mileage. Put Hydro-Trac to work on your new or used trucks. Write today for free literature and name of your nearest distributor.

## TRUCKSTELL®

Union Commerce Building, Cleveland 14, Ohio

Manufacturers of Specialized Truck Equipment for Plus Performance  
Power Dividers • Dual Drives • Trailing 3rd Axles • Swivel Frames



#### 5164-GS-B

164-pc tool set  
\$34.45 down  
only \$7.07 a week

# \$7.07 a week

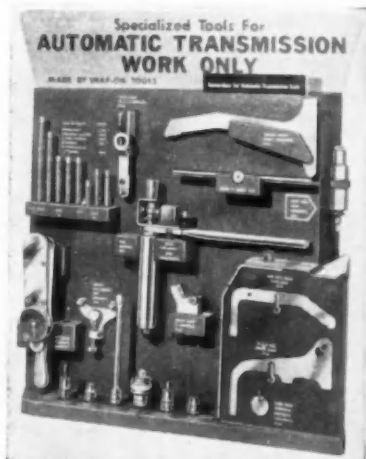
PUTS A SET LIKE THIS  
ON YOUR WORKBENCH

## NOW...

every mechanic can own  
*Snap-on Tools* with  
Snap-on's new pay-as-  
you-earn plan

### ATTENTION SHOP OWNERS AND SERVICE MANAGERS

Be sure to pass this advertisement to your mechanics — and remember, the Snap-on Credit Plan also applies to the latest in profit-building shop equipment.



#### 2026A-ATS

automatic transmission tool set  
\$10.67 down — only \$4.07 a week

Yes, it's a fact, men — you can be earning more money today with the Snap-on tools you pay for tomorrow.

**TEN PERCENT DOWN** puts any Snap-on tools to work for you. That's all it takes to start using the world's finest tools and shop equipment.

**LOW MONTHLY PAYMENTS** fit into most everyone's budget . . . make it easy and convenient to own Snap-on tools. It costs only a few dollars a month to own some sets.

**UP TO 20 MONTHS TO PAY THE BALANCE**, keeps payments low. The Snap-on Credit Plan offers a choice of payment periods — 6, 9, 12, 15, 18 or 20 months. Under terms like these, every Snap-on tool is within reach of all mechanics and shop owners.

It will pay you to investigate how easy it is to own and use Snap-on tools. The Snap-on man who calls at your shop can give you the simple details in a few minutes. Ask him about it.

\*Snap-on is the trademark of Snap-on Tools Corporation.

### SNAP-ON TOOLS CORPORATION

8026-A 28th Avenue • Kenosha, Wisconsin



# Tubeless Truck Tires—Boon or Bust?

Continued from Page 83

is no conclusive evidence of a trend either way so far as preference of operators is concerned. The percentage of new trucks sold with tubeless varies widely between manufacturers.

On light trucks it is practically 100 per cent, but ranges down-

ward as the size of the vehicles goes up. There are no definite figures available, but it is estimated that the number of new heavy units sold on tubeless ranges from a low of 12 to a high of 70 per cent on vehicles in the 18,000 to 22,000 gvw class.



**FOR FAST PICK UP  
in truck savings**

*Use* →

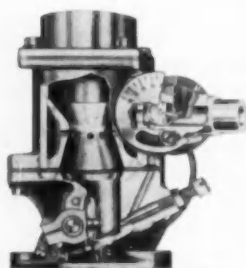
**ALGAS LP-GAS  
CARBURETION  
EQUIPMENT**

He thought so much of his Algas equipment, he had it chrome plated.



## What This Owner Thinks!

"I don't know how I ever operated without it," says the owner of Stone Rock Company in commenting on ALGAS LP-Gas equipment used on his pick-up truck. "It gives me the kind of performance that I must have and operating costs have been cut more than half." Whether the equipment is pick-up trucks, buses, or heavy-duty over the road vehicles for long hauls, you can depend on ALGAS LP-Gas equipment to always give you operating savings that you can see.



Write today for information on ALGAS LP-Gas carburetion equipment.



**AMERICAN LIQUID GAS CORPORATION**

1109 Santa Fe Ave. • Los Angeles, Calif.

• What about the effect of dented rims on air-holding capacity of tubeless tires?

There was some trouble at the outset with rim denting causing loss of air. However, quite early in the program the industry started to beef up both rims and tires so that today they are very rugged and will take any normal amount of abuse without causing loss of air. However, the heavier rims and tires have pretty well washed out any weight saving advantages of tubeless over conventional truck tires.

• Do the new tire size designations used in tubeless have any bearing on trouble some operators have been having?

In some cases it has resulted in difficulty. Apparently some operators do not realize that in sizes above 6.50x16, tubeless size designations are higher than the tubed-type size they replace. As a result operators may think, for example, that an 8x22.5 tubeless tire may carry approximately the same load as the conventional 8.25x20, whereas it actually replaces the 7.50x20 tubed tire (see chart on page 82). As a result of the confusion, some operators have been overloading their tubeless tires with the inevitable difficulties that come from overloading any type tire.

• Can the spare tire be eliminated with tubeless truck tires?

Under certain conditions this can be done, but it is not generally recommended. In areas where emergency service is available at intervals of no more than a few miles, it may be possible to eliminate the spare by putting the best tires on the single front wheels and depending on the mating dual to carry the load for a few miles in case of failure. However, tire companies frankly admit that despite all their efforts, education on repair procedures has not yet completely penetrated to smaller establishments which might be called on for emergency service on tubeless truck tires. For that reason, it probably will still be a year or two before it would be safe to depend on them for service and consequently will be risky to abandon the spare tire. All com-

(TURN TO PAGE 165, PLEASE)

**NO  
SLIDE!**



**NO  
SLIP!**



**NO  
SWERVE!**



**when POWR-LOK protects your vehicle and your life!**



POWR-LOK is a revolutionary differential that permits the rear axle to automatically deliver the greatest driving force to the rear wheel that has the best gripping traction.

POWR-LOK ends slipping on ice or wet hills and pavements if either rear wheel can catch hold.

POWR-LOK ends slipping, sliding and getting stuck in mud or sand if either rear wheel can catch hold.

POWR-LOK ends dangerous swerve and unbalance resulting from "wild wheel" hop and spin on rough, bumpy roads.

Your new light truck will be *safer*, more dependable under *all* driving conditions, if it is equipped with a Spicer Thornton POWR-LOK Differential. POWR-LOK is available in several 1957 models. Demand it in the next light truck you buy.

Write for descriptive POWR-LOK booklet.

**DANA CORPORATION • TOLEDO 1, OHIO**

**SPICER PRODUCTS:** Transmissions • Universal Joints • Propeller Shafts • Axles • Torque Converters • Gear Boxes • Power Take-Offs • Power Take-Off Joints • Rail Car Drives • Railway Generator Drives • Stampings • Spicer and Auburn Clutches • Parsh Frames • Spicer Frames

Spicer Axles and POWR-LOK Differentials are also manufactured in Canada by Hayes Steel Products Limited, Merrittton, Ontario.

**SO EASY TO USE!**

**SERVICE**

Two Signalclips OVER the ignition wiring...

Take a look at the screen — there's the engine fault...

Set the tach switch for number of cylinders...






# the **DU MONT**® *EnginScope*\*

The fabulous EnginScope is all ready to perform after only three simple operations:

- First, snap on the Signalclips OVER the ignition wire insulation.
- Second, set the calibrating switch for the precision tachometer.
- Third, take a look at the TV-like screen.

And looking at the screen of the EnginScope is the easiest of all three operations... the exclusive Du Mont SuperScan shows up the bad part or parts by easy, direct COMPARISON! Now you know the whole story on the tested engine. AND THE ENGINE WASN'T EVEN SHUT OFF!!

See the EnginScope in action in your own shop... fill in and mail the coupon below and we'll arrange for a demonstration. There's NO OBLIGATION, of course. The EnginScope is so easy to use that you'll want to use it right away.

## ALLEN B. DU MONT LABORATORIES, INC.

760 Bloomfield Ave., Clifton, N. J. • Dept. J-1

- ☐ Please have EnginScope representative call.
- ☐ Please send EnginScope literature.

NAME.....

ADDRESS.....

CITY..... ZONE..... STATE.....



\*Trade Mark

ONLY  
**\$725**

GET IN ON THE DU MONT USER-BONUS PLAN-ASK YOUR DEALER



## Tubeless Tires

Continued from Page 162

panies are putting great emphasis on programs to educate these smaller outlets on tubeless truck tire service.

On this point, Frank Eaton of Mason and Dixon Lines reports: "We had a tire company representative visit each of our road service points and give tubeless instructions. We also got a list of recommended tools and got the shops to purchase them at their own expense. This they were glad to do. We do not carry spares and have had no major road problems. The tubeless does not go flat as easily as the tube-type on the road."

• What should fleet operators know about maintenance of tubeless?

Plenty. This will be discussed next month as part two of this series. But a major point to remember is good inspection procedure. Large operators with the best experience thus far have been diligent in detecting punctures and nail holes almost immediately and repairing them promptly. With rayon cord tires, all holes leading into the ply area should be filled with tire dough even though they may not extend into the liner of the tire. This is to prevent water from entering the plies and damaging the cord.

Says Mr. Riley: "Along this line, nails become buried in the car-

(TURN TO NEXT PAGE, PLEASE)

for greatest  
overall economy

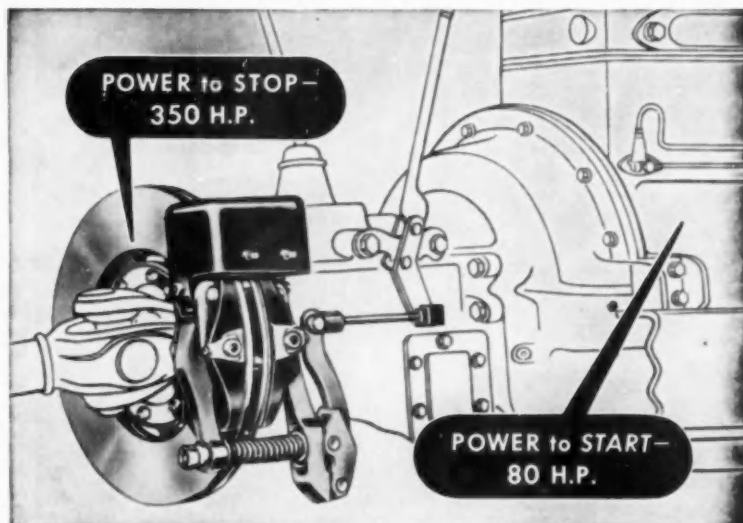
**WAUKESHA  
ENGINES**

DIESEL • GASOLINE  
NATURAL GAS • LP GAS



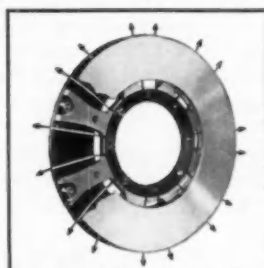
## It pays to specify Tru-Stop Brakes

**FOR LONG LIFE—EASY SERVICE**



### Have the surplus braking power emergency service requires

• In terms of horsepower, brakes actually do more work than the engine. For example:



#### Air-cooled for Long Life

• The terrific heat generated in braking shortens lining life. TRU-STOP design quickly dissipates this heat. Most of the disc is exposed to the air even during braking. And a jet of cooling air circulates between the disc blades and carries off heat.

Where it takes 80 H.P. to accelerate to 20 miles per hour, 350 H.P. is required to make a safe stop at that speed within required limits.

TRU-STOP Emergency Brakes have the surplus braking power required for emergency service. That is why they are more adequate for use as parking brakes.

TRU-STOP Brakes lower service costs, too. Relining or adjustment is a simple job for any mechanic with ordinary tools. It is not necessary to drop the drive shaft.

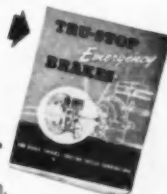
Specify TRU-STOPs for factory installation on the next vehicle you buy. Send for your copy of this booklet—the complete story of TRU-STOP Brakes.

**ACCO**



**Automotive and Aircraft Division  
AMERICAN CHAIN & CABLE**

601 Stephenson Bldg., Detroit 2  
2216 South Garfield Ave., Los Angeles 22 • Bridgeport 2, Conn.



## Tubeless Tires

Continued from Page 165

cass without causing flats. So much so that we have resorted to an electric metal detector in our service line."

Another point. While the tubeless does not cause as many flats, it is often subject to more minor air loss. Says Mr. Eaton: "Our

major objection to date is that the tubeless tires require more labor due to gaging and adding air. They are nearly always down a few pounds."

• **Is tread separation more common than with conventional truck tires?**

In the early days of tubeless truck tires there was some difficulty with separation. The reason is that air would escape from the air chamber and "wick" into the ply area through diffusion or a

break in the inner liner caused by a puncture, a manufacturing defect, or for some other reason.

Since the trapped air had no way to escape to the outside of the tire, it expanded when warm and consequently caused tread separation. This difficulty has been largely overcome because all manufacturers now vent the tires to the atmosphere permitting air trapped in the ply area to escape. Both Riley and Eaton agree on this point.

• **What about recapping?**

Tubeless tires can and have been retreaded two or more times when properly handled. It is true there has been more difficulty with recapped tubeless, but the principal trouble has been that the inner surface was not properly prepared beforehand to prevent leakage of air into the ply area. Sound casings which have no ply separation and in which the inner seal is airtight, will recap as well as conventional tires.

Though inspection of the tire inside and out is particularly important for a successful recapping job. While it is obvious that any leaks in the liner must be repaired in order to prevent seepage of air into the ply areas, it also is very important that any tread separation be discovered, since tires thus damaged are not suitable for recapping. Best time to inspect the tire for separation is immediately after it is taken off the wheel since residual trapped air will show up separations as blisters or raised areas.

Next month: "What Every Fleetman Should Know About Tubeless Tire Service."

END

Please Resume Reading Page 84



"Beats flying!"

**Your eye can see**  
**NIEHOFF**  
**Superiority**

**ENGINEERED  
FOR LONG LIFE AND  
PEAK PERFORMANCE**

- Trained eyes can easily see Niehoff's obvious superiority. The built-in advantage that makes Niehoff Ignition Parts superior to any on the market is...the specialized engineering that builds quality. Parts stay on the job longer...with longer periods of peak performance.
- Prove it to yourself. Ask your Niehoff jobber about the experience of other fleet owners and commercial repair shops in your area. Niehoff Ignition means less "Down Time" more "Road Time". That means profit to you.

**C. E. NIEHOFF & CO.**

4925 LAWRENCE AVE., CHICAGO, ILL.

WAREHOUSES

ATLANTA 3, GA., 95 Pine St. N. E.

DALLAS, TEX., 2715 Main St.

BOSTON 34, MASS., 250 Brighton Ave.

NEW YORK 19, N. Y., 250 W. 54th St.

PHILADELPHIA, PA., 1800 Fairmont Ave.

BRANCH: LOS ANGELES 15, CAL., 1330 W. Olympic Blvd.

## A Fleet Reports:

# Mufflers made of Armco ALUMINIZED STEEL Increased Service Life Five Times



One major truck fleet reports *five times* longer service life for mufflers made of Armco ALUMINIZED STEEL® than for carbon steel mufflers previously used.

In 1954, Super Service Motor Freight Company, Nashville, Tennessee, equipped 140 new diesel tractors with mufflers made of this special aluminum-coated steel.

On May 1, 1956, 61 of these mufflers were still on the job after an average of 240,000 miles in service. Average mileage for the 79 taken from service was 173,000. The

combined average mileage for all 140 mufflers is 202,000—*five times* the 40,000-mile average reported by Super Service for carbon steel mufflers previously used.

Super Service officials say these longer-lasting mufflers help insure maximum revenue by cutting downtime and reducing muffler replacement costs.

If you'd like to know where you can get extra long-lasting mufflers made of Armco ALUMINIZED STEEL, just fill in and mail the coupon.

### Armco Steel Corporation

787 Curtis Street,  
Middletown, Ohio

Where can I buy mufflers made of  
ALUMINIZED STEEL for:

- ☐ Trucks and tractors  
☐ Autos

Name \_\_\_\_\_

Firm \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

## ARMCO STEEL CORPORATION

787 CURTIS STREET, MIDDLETOWN, OHIO

SHEFFIELD STEEL DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION



# NEW "WALK-IN"

# DIVCO

## BUILT FOR WHOLESALE

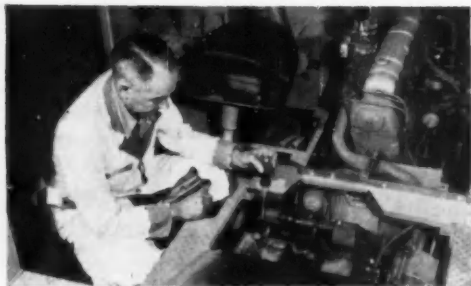
## DAIRY DELIVERY...

**16,500 GVW 10' OR 12' BODY SIZES**

Rapid national shift of population toward suburbs has resulted in new patterns of delivery demands. This growth of store-to-store routes and expansion of dairy products requirements have presented new problems to wholesale dairy operators. Divco research experts together with skilled technicians have studied this change in market patterns and have designed this new vehicle to give the wholesaler the same multi-stop flexibility and economy that the smaller Divco trucks give to the retail field.

### AVAILABLE FACTORY INSULATED AND REFRIGERATED!

Controls cargo temperature throughout even the longest route. Divco's advanced methods of insulating and refrigerating are the result of many years of research, testing and experience. Both self-contained and slave units for plugging into a central cold plant are available. Where cold-plates are used, sidewall mounting near ceiling provides 67" headroom.



#### EASY ENGINE ACCESSIBILITY

Minor servicing is easily accomplished by simply lifting hinged access hood. Entire power plant is exposed for major repair work by removing sound and heat resistant access panels. All service and repair work can be done from inside the cab. Fuel and radiator intakes are exterior mounted for quick accessibility.

Each "Dividend Series" Divco truck is powered by a husky Divco Super 6 valve in head 253 cu. in. displacement engine. Axle ratios 6.66 or 7.2 to 1 are available. Heavy duty 4 speed synchromesh transmission gives smooth and easy multi-stop operation.

#### CARGO ACCESSIBILITY

Bulkhead provided behind driver with optional doors allows instant access to load from cab. Solid bulkhead also available. A curb-side door can be obtained as optional equipment allowing easy access for loading and unloading from the side. Rear doors or solid back available.

#### MODEL 41 (<sup>130"</sup> WHEELBASE)

#### DIVIDEND SERIES

12' BODY...180 square bottle case capacity when insulated and refrigerated.

Cargo capacity..... 470 Cu. Ft.\*

Exterior:  
overall truck length..... 223½"  
overall truck height..... 111"  
truck width..... 86½"

Interior—when insulated  
cargo compartment length... 137"  
cargo compartment height... 67"  
cargo compartment width... 74"  
(between sidewalls)

7.00x20-10 ply front tires and 7.50x20-10 ply dual rear tires

Extra heavy duty springs with rear helpers

Extra heavy duty brakes and parking brakes

#### MODEL 51 (<sup>117½"</sup> WHEELBASE)

#### DIVIDEND SERIES

10' BODY...165 square bottle case capacity when insulated and refrigerated.

Cargo capacity..... 412 Cu. Ft.\*

Exterior:  
overall truck length..... 205½"  
overall truck height..... 111"  
overall truck width..... 86½"

Interior—when insulated  
cargo compartment length... 119"  
cargo compartment height... 67"  
cargo compartment width... 74"  
(between sidewalls)

7.00x20-10 ply front tires and 7.50x20-10 ply dual rear tires.

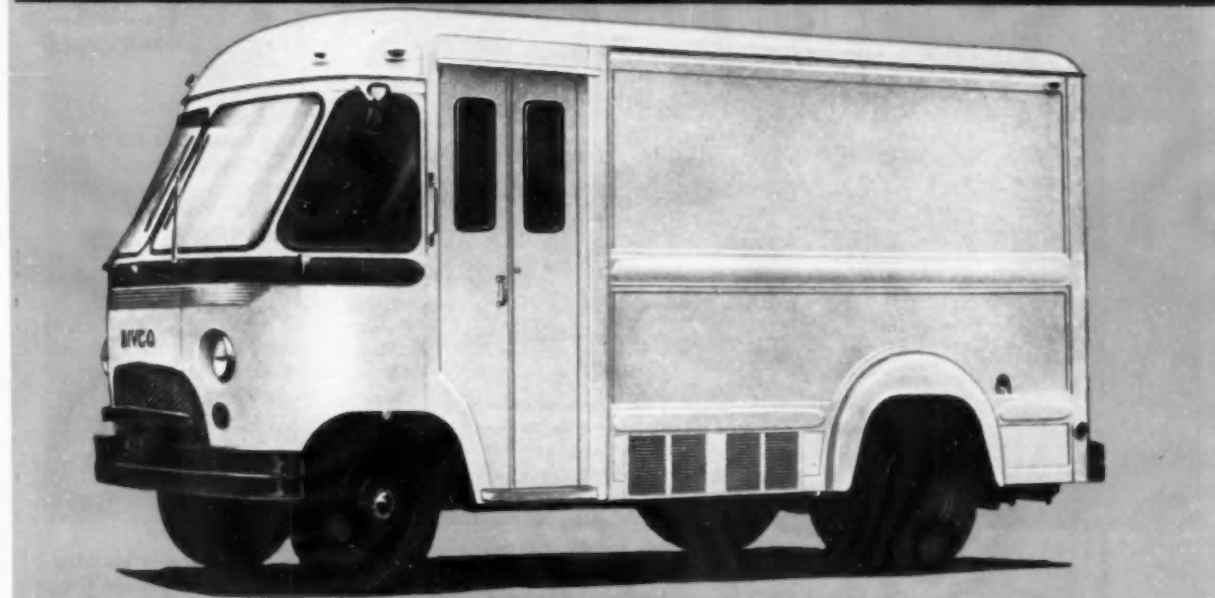
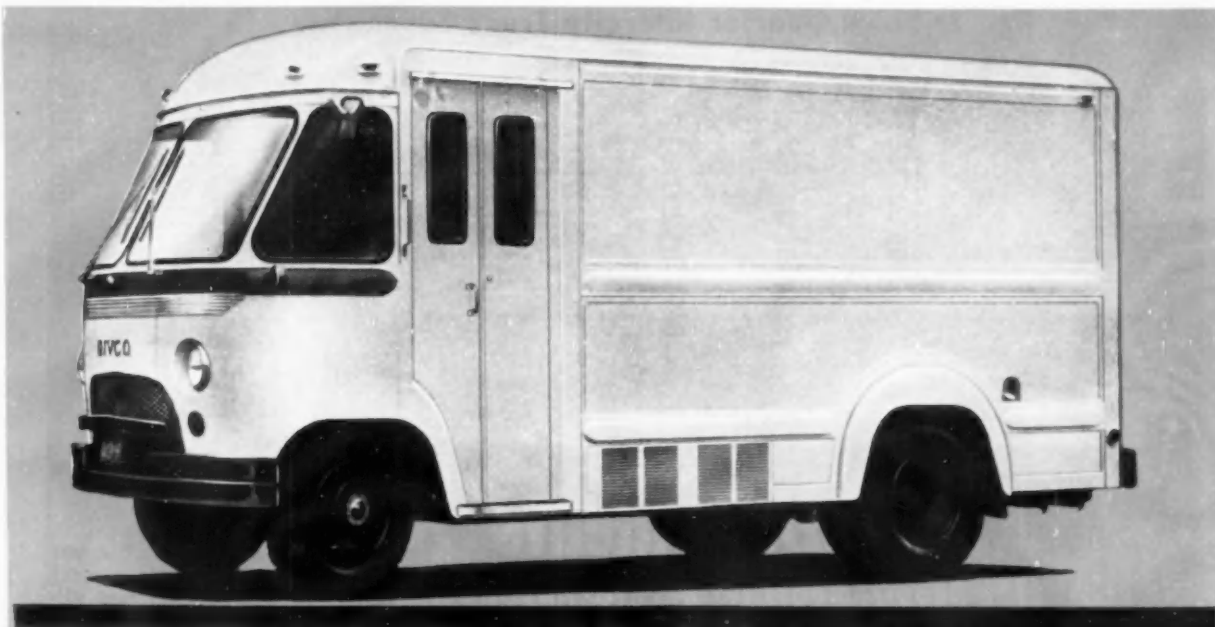
Extra heavy duty springs with rear helpers.

Extra heavy duty brakes and parking brakes.

\*Before insulation

#### NEW DISTINCTIVE STREAMLINED STYLING

Sharp clean modern look and unique bus-like appearance set "Dividend Series" trucks apart from all others on the road today.



OVER 80% OF ALL DIVCO TRUCKS BUILT SINCE 1927 ARE STILL IN USE

# DIVCO TRUCKS

DIVCO TRUCK DIVISION • DIVCO-WAYNE CORPORATION • DETROIT 5, MICHIGAN

## GREATER MANEUVERABILITY

New "Dividend" trucks take sharpest turns in narrow alleys with ease because of their short wheelbase and minimum overall length.

## IMPROVED ROADABILITY AT ALL SPEEDS

A carefully engineered system of springing and double acting shock absorbers on all wheels protects cargo, reduces driver fatigue and cuts down on maintenance.

- EXTRA RUGGED ALL-WELDED CHASSIS
- LOW STEPS\*CONVENIENT ACCESS TO PRODUCT
- EASY OPERATING FOLDING DOORS
- WIDE SCOPE DRIVER VISIBILITY
- GREATEST POSSIBLE FREEDOM FROM CORROSION
- REMOVABLE BODY PANELS
- WIDE CHOICE OF OPTIONAL FEATURES



## Third Quarter Intercity Truck Tonnage

### By Regions

Region	Third Quarter 1956*	Third Quarter 1955*	Per Cent Change
New England	3,545	3,181	+11.4
Middle Atlantic	14,293	14,538	-1.7
Central	22,110	23,251	-4.9
Southern	8,689	8,555	+1.6
Northwestern	3,751	3,756	-0.1
Middlewestern	4,296	4,253	+1.0
Southwestern	5,883	5,677	+3.6
Rocky Mountain	2,650	2,761	-4.0
Pacific	9,716	8,688	+11.8
United States	74,933	74,660	+0.4

### By Commodities

Commodity	Third Quarter 1956*	Third Quarter 1955*	Per Cent Change
General Freight	35,210	35,133	+0.2
Household Goods	928	759	+22.3
Heavy Machinery	916	884	+3.7
Liquid Petroleum	18,153	17,373	+4.5
Refrigerated Liquids	385	401	-4.1
Refrigerated Solids	647	554	+16.8
Agricultural Commodities	1,948	1,531	+27.2
Motor Vehicles	2,111	3,019	-30.1
Building Materials	3,200	3,272	-21.2
All Other	11,456	11,735	-2.4
Total	74,933	74,660	+0.4

\* In thousands of tons. Covering 2020 ICC Class I intercity common and contract motor carriers of property as reported by ATA Research Dept.

## January News Roundup

Continued from Page 90

**Fleet Supervisor Training.** The new certificates bring the number since the program began to 95. Edward Edmonds, of Armour and Co., was elected member-at-large of the committee, replacing Richard O. Bennett.

### Fleet Courses

The National Committee for Motor Fleet Supervisor Training reports that at least 10 courses in motor fleet safety and industry management will be offered in various colleges and universities throughout the country in 1957 in addition to the fifty now being offered. This is a 300 per cent increase in number of available courses since 1950. As announcement is made of these and other training courses of interest to fleet operators, they are included in Commercial Car Journal's Fleet Course Calendar (see page 133, this issue).

### AGCA Building Planned

Progress is being made in planning a new home for The Associated General Contractors of America in Washington, D. C., President Frank J. Rooney, Miami, Fla., has announced Working drawings are being prepared by the architectural firm of Chatelain, Gauger & Nolan, Washington, D. C. Exterior of the three-story and basement building will be buff Indiana limestone with harmonizing trim. It will be located on the northeast corner of 20th and E Streets, N. W.

### Civil Defense Trucks

Thirty-five truck and truck body manufacturers recently met with the Federal Civil Defense Administration (TURN TO PAGE 174, PLEASE)

# Clamptite "Meats"

## The Requirements for REFRIGERATOR Body Door Locks



Body by General Body Mfg. Co. Kansas City, Mo.

"Meats" and not "Meets" was intentional, as we're most anxious to again let you know what an excellent job the Clamptite lock is doing on meat trucks everywhere.

In fact on just a great many refrigerator bodies as well as van bodies. For single doors, double doors or end gates.

Can be had with 2 keepers for shorter doors and with built-in key lock or padlock eyes. Exceptional leverage clamps door tight and breaks frost seal upon opening.

Write for the Catalog...

**EBERHARD MANUFACTURING COMPANY**  
EVARTS AVE. • CLEVELAND 4, OHIO  
Division of the Eastern Malleable Iron Company

**LONGRUN**



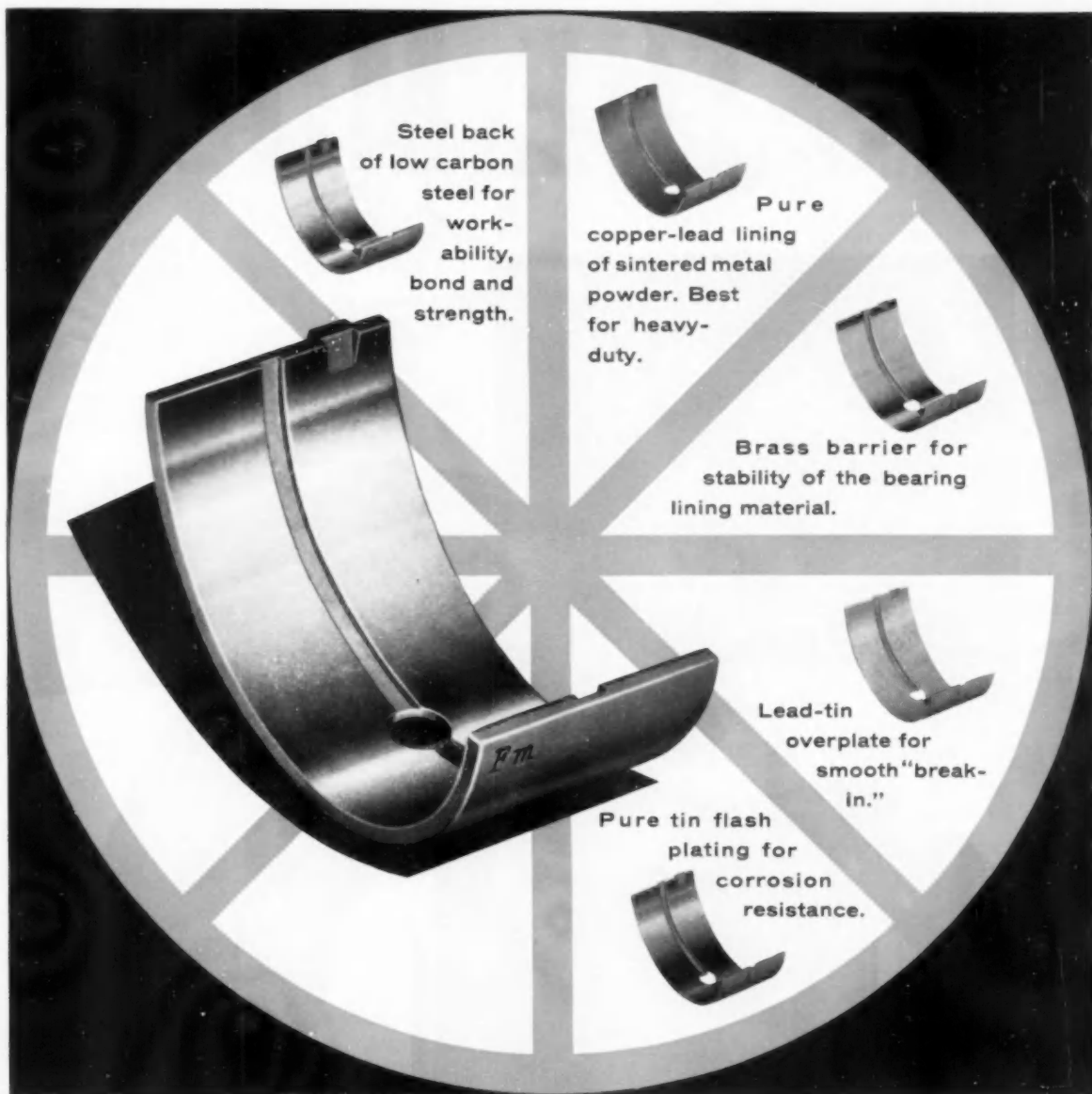
TRUCK BODY AND EQUIPMENT ASSOCIATION, INC.

TRUCK BODY HARDWARE BY

# EBERHARD

THE MOST COMPLETE LINE AVAILABLE





## You really keep 'em rolling with Fm sintered bearings!

Here's the bearing that was created for heavy-duty fleet mileage. At every step it is engineered to meet "inside the engine" conditions, so that you keep 'em rolling with trouble-free operation from overhaul to overhaul. The uniform high quality made possible by the patented Fm sintered copper-lead alloy means uni-

formly high quality in road performance. That factor has made Fm bearings first choice of the nation's fleets by two to one! Ask your Federal-Mogul jobber.

### FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.

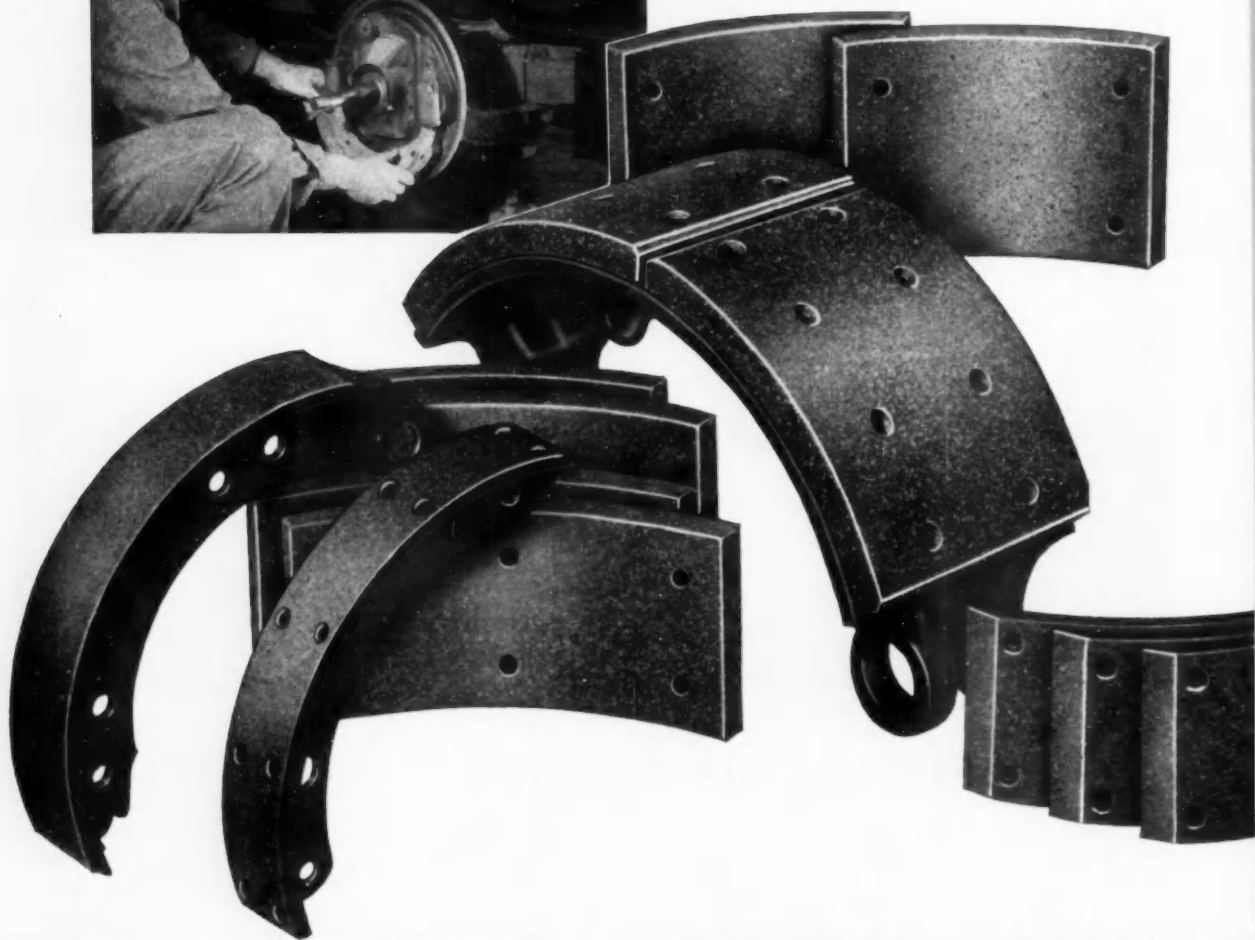


Fleet



Mileage

# "IT'S THE MOST.."



## **Wagner Lockheed**

*the best known name in brake service*



•and costs you less in long run

# Wagner<sup>®</sup> Lockheed

## HEAVY DUTY BRAKE LINING

The popular slang expression, "it's the most", definitely applies to Wagner Lockheed—the heavy-duty lining that has the most of everything...most in balanced quality...most in coverage...most in proven performance...most for the money...most for perpetuating good, safe brakes. You can't beat it!...it's tops for quality.

Reline with this safety-proven Wagner Lockheed brake lining. It is engineered to meet the rigid demands of modern over-the-road driving. It is unsurpassed for quick, safe, smooth stops.

You'll like the long-wearing qualities of Wagner Lockheed brake lining. It wears slowly and evenly, and brakes require fewer adjustments even though exposed to heavy-

duty service under severe driving conditions.

This top-quality lining is uniform in density, composition, and frictional qualities throughout its entire service thickness...will not compress, absorb moisture, or deteriorate with age. Contains no harmful abrasive materials to damage drums.

Wagner Lockheed lining and blocks are available in hundreds of different sets, and slabs are made in combinations of radius, thickness and width for application on practically every heavy-duty vehicle brake.

You can benefit, too, by buying all your brake service needs—Wagner Lockheed Hydraulic Brake Parts, Fluid and Lining—from one dependable source.

### EXCHANGE SHOE SETS

save you time and money. They are relined with Wagner approved lining—riveted or bonded. For details on complete line—including Wagner Lockheed Brake Parts and Fluid—write for Catalog AU-1.



WAGNER LOCKHEED BRAKE PARTS,  
FLUID AND LINING...AIR BRAKES...AIR HORNS...  
TACHOGRAPHS...NOROL...ELECTRICAL PRODUCTS



### Wagner Electric Corporation

6470 Plymouth Ave. • St. Louis 14, Mo.  
(Branches in principal cities in U. S. and in Canada)

Please send me a FREE copy of Catalog AU-1.

NAME \_\_\_\_\_

FIRM NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY & STATE \_\_\_\_\_

B57-2

## January News Roundup

Continued from Page 170

in Battle Creek, Mich., to discuss changes in design requirements for heavy duty civil defense rescue trucks. One new development needed for such trucks, brought about by increasing knowledge of radioactive fallout, is protective shielding against dangerous radiation. Other design changes discussed by the manufacturers included operational self-sufficiency and ade-

## 1956 Domestic Truck Factory Sales by GVW

	5,000 lb. and less	5,001-10,000	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	Over 26,000	Total
January	38,771	12,976	2,896	15,309	3,289	4,658	5,851	83,752
February	37,350	14,123	3,139	14,443	4,326	4,364	6,007	83,752
March	36,396	14,973	3,297	14,541	5,528	5,250	6,911	86,996
April	32,777	14,758	3,240	14,385	5,251	4,950	7,039	82,400
May	28,572	15,919	3,070	12,629	5,720	4,642	7,041	77,593
June	29,954	10,910	3,168	13,131	5,513	4,063	6,994	73,463
July	23,443	12,279	2,433	12,354	4,689	3,118	4,758	63,044
August	29,338	12,371	2,882	12,019	4,355	3,296	4,748	68,809
September	22,343	10,679	2,197	9,894	3,548	2,936	5,255	56,852
October	32,914	16,428	2,738	11,539	4,817	3,222	5,876	77,533
Total—10 Months—1955	311,858	135,416	28,947	130,244	47,016	40,529	60,182	754,194
Total—10 Months—1956	430,304	140,934	33,122	149,404	35,700	29,749	48,267	887,490

Source: Automobile Manufacturers Assn.

quate, uniform stowage of rescue tools and machinery.

## 1956 Truck Trailer Shipments

	October	Ten Months
<b>Vans:</b>		
Insulated and refrigerated	282	4,562
Steel	52	972
Aluminum	230	3,590
Furniture	164	1,627
Steel		
Aluminum	164	1,627
All other closed-top	2,203	22,426
Steel	1,140	9,802
Aluminum	1,063	12,624
Open-top	282	3,177
Steel	160	1,445
Aluminum	122	1,731
<b>Total—Vans</b>	<b>2,931</b>	<b>31,992</b>
<b>Tanks:</b>		
Petroleum	406	4,521
All other	108	919
<b>Total—Tanks</b>	<b>594</b>	<b>5,440</b>
<b>Pole, pipe and logging:</b>		
Single Axle	44	516
Tandem Axle	58	1,162
<b>Total</b>	<b>102</b>	<b>1,678</b>
<b>Platforms:</b>		
Racks, livestock, stake	73	814
Grain bodies	197	995
Flats, all types	622	7,327
<b>Total—Platforms</b>	<b>892</b>	<b>9,036</b>
<b>Low-bed heavy haulers</b>	<b>183</b>	<b>2,646</b>
<b>Dump trailers</b>	<b>178</b>	<b>1,623</b>
<b>All other trailers</b>	<b>233</b>	<b>2,323</b>
<b>Total—Complete Trailers</b>	<b>5,113</b>	<b>54,738</b>
<b>Chassis</b>	<b>356</b>	<b>3,305</b>
<b>Total—Trailers and Chassis</b>	<b>5,469</b>	<b>58,043</b>

Source: Industry Division, Bureau of the Census.

## AMONG THE STATES

**Illinois**—State's Appellate Court has halted the injunction against enforcement of the state's mud flap law. At the present time, the law setting rigid flap specifications is being enforced. A hearing in a Circuit Court is pending to obtain a permanent injunction.

**New Jersey**—Lessee as well as owner is responsible for overweight penalties (\$36).

**New York**—Effective first of this month, commercial vehicles subject to Public Service Commission regulation are required to meet brake requirements similar to the ICC's brake regs.

(TURN TO PAGE 176, PLEASE)

# HOOF Governors

## Reduce All Operating Costs!



tire wear

engine overhauls

gas and oil consumption

brake relinings

insurance premiums

accident hazards

clutch and rear end repairs

No other single item costs so little and saves so much as Hoof Governors.



Exclusive patented Cantilever Spring assures Hoof's accurate speed control, simplified construction, longer life.

Write today for full details.

### HOOF PRODUCTS CO.

6543 So. Laramie Ave., Chicago 38, Ill.



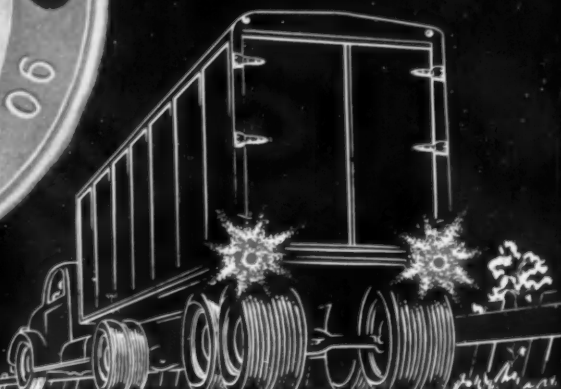
# NEW **DIETZ** REFLECTOR SAYS

# STOP!

## 5 WAYS BETTER!



ACTUAL SIZE



### No. 90 REFLEX REFLECTOR

4 $\frac{3}{8}$ " wide x 4 $\frac{1}{2}$ " high.  
Lens available in red or  
amber.

(SIDE VIEW)

$\frac{7}{16}$ " deep. Mounting  
holes correspond with  
Dietz Nos. 85 and 86  
reflectors.

1. **LOWEST PRICED** . . . a quality  
reflector in which maintenance  
costs have been eliminated.  
Will actually outlast the  
vehicle!

2. **HIGHLY REFLECTIVE LUCITE LENS**  
is fadeproof and shatterproof.

3. **MORE DURABLE** 1-piece con-  
struction . . . solid aluminum  
housing will not rust or  
corrode.

4. **SHALLOW DEPTH** . . . ( $\frac{7}{16}$ ")  
reduces possibility of damage  
to reflector.

5. **WATERPROOFING GASKET**  
completely seals against mois-  
ture and dust. *Only one-piece  
reflector on the market gasketed  
for waterproofing!*

• • •

There's a **DIETZ** Reflex  
Reflector to fill every need



No. 95



No. 85



No. 86



No. 84

FOR DETAILS see your Dietz  
jobber, or write to R.E. Dietz  
Company, Syracuse 1, N.Y.,  
Manufacturers of the most  
complete line of automotive  
lighting and safety equipment  
in the world.

"Go **DIETZ** and you go *safely*"



## LOW TEMP LUBRIPLATE

**\* Best for  
Sub-Zero  
Lubrication**

Highly recommended for general grease applications on all types of machines operating at very low temperatures. Remains plastic at temperatures as low as 70° F below Zero and has a Melting Point of 270° F. Possesses high film strength and is of a consistency that meets all requirements. Can be easily applied through grease guns or by other means of application. Low TEMP LUBRIPLATE is waterproof and will protect automotive and other types of equipment against the unfavorable effect of salt or calcium chloride as used on highways during winter months.

**REGARDLESS OF THE SIZE AND  
TYPE OF YOUR MACHINERY,  
LUBRIPLATE LUBRICANTS  
WILL IMPROVE ITS OPERATION  
AND REDUCE MAINTENANCE**

For nearest LUBRIPLATE distributor see Classified Telephone Directory. Write for free "LUBRIPLATE DATA BOOK"... a valuable treatise on lubrication. LUBRIPLATE DIVISION, Fiske Brothers Refining Company, Newark 5, N. J. or Toledo 5, Ohio.



## January News Roundup

Continued from Page 174



Brentwood Motor Coach, Brentwood, Pa.—to 23 drivers with no-accident records of from one to 14 years.

Roadway Express, Akron, Ohio — Honored by Transportation Underwriters for reaching 1,274,815 miles without an accident during October, 1956.

Dohrn Transfer, Rock Island, Ill.—to 166 drivers, representing 71 per cent of the fleet's driving staff. Top man had 19 accident-free years.

(TURN TO PAGE 178, PLEASE)

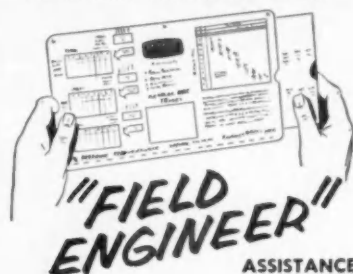
There are now  
**120**  
Water Pumps  
in  
our line  
**Hohler**  
LANSING & MICHIGAN

**KINNEAR** STEEL  
Rolling Doors  
They save space; open straight upward. Surrounding space is always fully usable. All metal protection against fire, wind, theft. Any size, for trucks or buildings. Write.

**KINNEAR** The KINNEAR  
Manufacturing Co.  
2100-29 Fields Ave.  
Columbus 16, Ohio

**FRINK**  
**SNO-PLOWS**  
Both "V" TYPE and  
ONE WAY BLADE TYPE  
hand or power hydraulic control  
FOR ALL MOTOR TRUCKS  
FROM 1½ to 10 TONS  
FRINK SNO-PLOWS, INC., CLAYTON, 1000 1st, N.Y.  
FRINK SNO-PLOWS OF CAN. LTD., TORONTO, ONT.

CONSULT YOUR NEAREST  
DAYBOOK DISTRIBUTOR FOR:



**ALABAMA**—FAIRFIELD—Duncan Mfg. & Equipment Co.  
**ARIZONA**—PHOENIX—Superior Coach Sales & Service  
**CALIFORNIA**—FRESNO—Utility Trailer Sales Co. • LOS ANGELES—Standard Carriage Works • MAYWOOD—Western Body & Host Co. • SAN FRANCISCO—Utility Trailer Sales Co.  
**COLORADO**—DENVER—Timphe Bros, Inc.  
**CONNECTICUT**—SOUTH NORWALK—Truck Equipment Co., Inc.  
**FLORIDA**—BRADENTON—Miller Sales, Inc. • JACKSONVILLE—Florida Trailer & Equipment Co. • MIAMI—DeBoliac Truck Equipment Co. • W. PALM BEACH—DeBoliac Truck Equipment Co.  
**GEORGIA**—ATLANTA—Brooker Truck Equipment Co.  
**IDAHO**—BOISE—Carl R. Burt Equipment Co.  
**ILLINOIS**—CICERO—Able & Equipment Sales Co. • SPRINGFIELD—Capitol Trailer & Body Co.  
**INDIANA**—EVANSVILLE—Superior Welding Co. • FORT WAYNE—Hoosier Truck Equipment • NOBLESVILLE—Warner Commercial Body, Inc. • SOUTH BEND—General Equipment & Machine Co.  
**IOWA**—DES MOINES—Weston Dump Body Co.  
**KANSAS**—LIBERAL—Tradewind Industries, Inc.  
**KENTUCKY**—LOUISVILLE—Tom Rice, Inc.  
**LOUISIANA**—BATON ROUGE—Dealers Truck Equipment Co. • SHREVEPORT—Dealers Truck Equipment Co.  
**MARYLAND**—BALTIMORE—Warner Fruehauf Trailer Co., Inc.  
**MASSACHUSETTS**—MEDFORD—W. F. Lacey & Sons Co.  
**MICHIGAN**—DETROIT—Knorr-Maynard, Inc. • GRAND RAPIDS—Allied Truck Equipment Co. • LANSING—Truck & Trailer Equipment Co. • ROSEVILLE—J. J. Lynn & Son • SAGINAW—Scientific Brake & Equipment Co.  
**MINNESOTA**—DULUTH—Lakeshore Body & Equipment Corp. • ST. PAUL—Power Brake & Equipment, Inc.  
**MISSOURI**—KANSAS CITY—Monaco Manufacturing Corp. • ST. LOUIS—Steelweld Equipment Co., Inc.; McCabe-Powers Auto Body Co.  
**MONTANA**—JOPLIN—McClellan's, Inc. • MISSOULA—Superior Coach Sales\*  
**NEBRASKA**—OMAHA—Omaha Body & Equipment Co.  
**NEW JERSEY**—NEWARK—Industrial Truck Equipment Corp. • THOROFARE—H. A. DeHart & Son  
**NEW MEXICO**—ALBUQUERQUE—Timphe Bros, Inc.  
**NEW YORK**—ALBANY—Estate of Andrew J. Roman • BUFFALO—Universal Truck Equipment Corp. • GARDEN CITY PARK—J. C. Truck Equipment, Inc. • NEW YORK—Amel Brake Co. • SHERMAN—Sherman Hydraulic Co. • SYRACUSE—L. B. Smith, Inc. • TROY—Howe Brothers  
**NORTH CAROLINA**—CHARLOTTE—Twin-States Equipment Co.  
**NORTH DAKOTA**—FARGO—Travis Bros. Body Works  
**OHIO**—CINCINNATI—Melvin L. Aston Welding Co. • CLEVELAND—Schaefer Body, Inc. • COLUMBUS—Harry J. Reynolds & Associates, Inc. • DAYTON—Kencar Equipment Co. • TOLEDO—Body-Manner Truck Equipment Corp. • YOUNGSTOWN—Dentry Truck Body & Trailer Service Co.  
**OREGON**—PORTLAND—Rudy Yost Equipment; Air Mac, Inc.\*  
**PENNSYLVANIA**—ALLENTOWN—Allentown Brake & Wheel Service • CAMP HILL—L. B. Smith, Inc. • ERIE—Farm Equipment Co. • HUMMEL'S WHARF—Tranco Mfg. & Sales Co. • PHILADELPHIA—S. J. Esken • PITTSBURGH—Barati Brothers • SCRANTON—Brake Service Company • WILLIAMSPORT—Servall Machinery & Supply Corp.\*  
**TENNESSEE**—KNOXVILLE—Post & Company, Inc. • MEMPHIS—Dealers Truckstall Sales, Inc. • NASHVILLE—Tennessee Steel Products, Inc.  
**TEXAS**—DALLAS—Texas Hydraulic & Equipment Co. • EL PASO—P & R Truck Equipment Co. • HOUSTON—Truck Parts & Equipment, Inc. • SAN ANTONIO—Commercial Body Corp. • WICHITA FALLS—Longhorn Trailer & Body Co.  
**UTAH**—SALT LAKE CITY—H. H. Nielsen Equipment Co.  
**VIRGINIA**—RICHMOND—Baker Equipment Engineering Co.; McIlhenny Equipment Co., Inc.\* • ROANOKE—General Welding & Machine Co.; McIlhenny Equipment Co., Inc.\*  
**WASHINGTON**—SEATTLE—Transport Trailer & Equipment Co.; Air Mac, Inc.\* • SPOKANE—Spokane Machinery Co., Inc.; Air Mac, Inc.\*  
**WISCONSIN**—APPLETON—Auto Body Works, Inc. • MADISON—Johnson Welding & Equipment Co., Inc. • MILWAUKEE—Motor Truck Body Co.; Brake & Equipment Co., Inc.\*  
**DISTRICT OF COLUMBIA**—WASHINGTON—Warner Fruehauf Trailer Co.

\*Indicates Power Loader distributors only.



# LOOK TO DAYBROOK

...For the Finest, Most Complete Line of  
Materials Handling Equipment For Trucks!



- Your Daybrook distributor offers a new standard of *Customer Satisfaction!*

- The Daybrook complete line is 100% designed, engineered, and manufactured by Daybrook—assuring quality of materials, finest construction and workmanship.

- New, exclusive mechanical construction fea-

tures—PLUS the sealed hydraulic cylinder that merits Daybrook's *one-year warranty.*

- Expert "Field Engineering" assistance that puts the *right* equipment on the job.

See your Daybrook distributor . . . let him help you with the equipment and "know-how" that makes trucks *more* than transportation.

**DAYBROOK HYDRAULIC DIVISION • L. A. YOUNG SPRING & WIRE CORPORATION • BOWLING GREEN, OHIO**

## January News Roundup

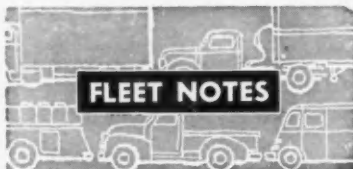
Continued from Page 176

**Royal Transit, Milwaukee, Wis.**—to seven drivers with no accident records of from 16 to 34 years.

**Darling Freight, Grand Rapids, Mich.**—to 86 drivers with a combined total of 5.1 million no-accident miles.

**R. C. Motor Lines, Columbia, S. C.**

—to 53 drivers, two of whom had 14-year safe records.



**F. J. Boutell Driveaway drivers at Flint, Mich.** are now trained in first aid techniques. A total of 102 drivers

have completed the American Red Cross 32-hour training program.

**Rochester Transit President William A. Lang** has been elected president of the New York State Motor Bus Assn.

**Vernor's Ginger Ale** has promoted **Joseph Brown** to fleet superintendent. He was formerly garage manager at Windsor, Ont.

**Nat H. Williams**, general manager of **Williams Transportation Co.**, Los Angeles, has been elected president of the Los Angeles Transportation Club.

**National City Lines** is entering the truck rental field in six areas where it operates the local bus system. A wholly owned subsidiary, **National City Truck Rental Co.** has been set up to handle leasing trucks in South Bend, Ind.; Canton, Ohio; Tulsa, Okla.; Davenport, Iowa; Rock Island-Moline, Ill.; and Lincoln, Neb. If the operation is successful in these cities, it will be introduced in some 35 other cities where NCL operates buses.

**Kansas City Public Service** will spend about \$1½ millions for 67 new buses between now and July 1, 1957. The new 51-passenger units will be used to convert two street car and two trolley bus routes.

**Ringsby Truck Lines, Denver, Colo.**, is now using new double-unit 24-ft trailer combinations on the Los Angeles-Nevada-Salt Lake City runs. The new combinations have about 30 per cent more load space than the former, longer semi-trailers and provide for greater operating flexibility.

**Mahlman Transfer, Mitchell, S. D.** has been appointed an agent for **Aero Mayflower Transit**.

New officers elected by the Mid-west Shipper-Motor Carrier Conference include **Gail H. Crawford**, general manager, **Ringsby Truck Lines**, as vice president and **E. J. Rubert**, president, **Powell Brothers Truck Lines, Springfield, Mo.**, as treasurer.

**Mid-Continent Freight Lines, St. Louis, Mo.**, has replaced 100 of its trucks with a new lightweight fleet of 75 International Model No. DC-405-L diesel units, expected to handle the same volume as the older units.

**Avis Rent-A-Car System** is adding 3500 new cars to its rental fleet at the 250 airports the system now serves. By Feb. 1, 1957 the Avis fleet (TURN TO PAGE 180, PLEASE)



*light as a feather  
... strong as an ox!*

### THE NEW TULSA® POWER TAKE-OFF SINGLE SPEED • MEDIUM DUTY

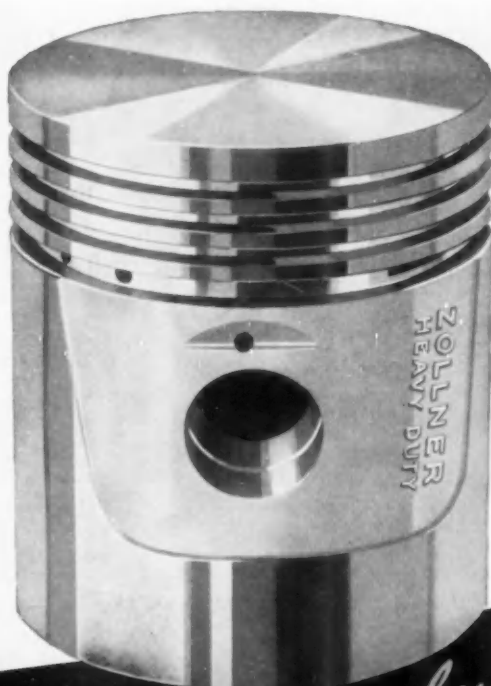
Extremely light . . . you can hold it in the palm of your hand . . . because the NEW TULSA Power Take-Off has a die-cast aluminum housing which at the same time gives all the ruggedness and durability for which the TULSA line is famous around the world. Output shaft available in three sizes—13/16", 7/8" and 15/16"—and rotates on two needle bearings. Furnished with either cable or lever control to suit individual operators' requirements. Designed and built for the full range of medium duty work, this new power take-off offers the extra advantage of low price, nationwide distribution and service that have made the TULSA line a favorite everywhere.





# THE

**ORIGINAL EQUIPMENT  
PISTON OF OVER 70%  
OF ALL TRUCK AND  
BUS MANUFACTURERS**



**ZOLLNER**

**PISTONS**

**HEAVY DUTY PISTONS by  
ZOLLNER**

**Proved by Fleet Records Everywhere  
HIGHEST ENGINE PERFORMANCE  
LOWEST MAINTENANCE COST**

**For reconditioning  
Always Specify the  
"ENGINEER APPROVED" PISTON**

Expertly engineered pistons make a big difference in engine performance—and operating cost. That's why it's always best to insist on Zollner "Engineer-Approved" Pistons when reconditioning your engines. The big majority of engine manufacturers work hand-in-hand with Zollner engineers in the development of pistons best suited to heavy-duty use. Over 70% of all makes of trucks and buses are Zollner equipped — and have been for years. Only when you use Zollner can you be sure that your pistons are expertly designed and precision-made to individual engine specification for utmost performance and economy of operation.

**ZOLLNER • FORT WAYNE, INDIANA**





**W. F. Miller**, fleet sales manager, Electric Auto-Lite Co.



**C. L. Hitchcock**, truck sales manager, Studebaker-Packard Corp.



**E. M. Mitchell**, assistant sales mgr., Dayton Steel Foundry



**F. A. Haag**, automotive refrigeration, B-W Air Brake Co.



**C. L. Bohlen**, engineering director, Strick Trailers



### *"Granny Gear" isn't for old ladies.*

Crawling up a four mile steep Sierra grade with a 10 ton load takes tough men and tougher equipment. There's no such thing as "normal conditions" in the fleet business. That's why efficient outfits use only BLUE STREAK for ignition replacements. These special heavy

duty parts are built for fleet men who like to save dollars on operating costs, not pennies on parts. Make it a point to specify BLUE STREAK. For more information, write: Standard Motor Products, Inc. Long Island City 1, New York.

## **BLUE STREAK**

*Heavy-duty Ignition Parts for Fleets*

Coils • Condensers • Point Sets • Voltage Regulators • Switches  
Rotors • Distributor Heads • Brush Sets • Wire & Cable



## **January News Roundup**

Continued from Page 178

will total more than 12,000 automobiles.

**Kenneth N. Beadle**, director of safety for **Pacific Intermountain Express**, has been elected general chairman for the executive committee of the National Safety Council's commercial vehicle section.

**Aero Mayflower Transit**, Indianapolis, Ind., has purchased 160 new Trailmobile 31-foot trailers. They will be used to replace 60 trailers of older design.

**Railway Express Agency** has appointed **James A. Warren** as assistant director of public relations.

**Spector Freight System**, Chicago, has purchased **Schumacher Motor Express**. The purchase includes facilities and service rights with direct points in Wisconsin, Minnesota, Illinois and Indiana. Spector has also applied for ICC permission to merge with **Mid-States Freight Lines**, Chicago.

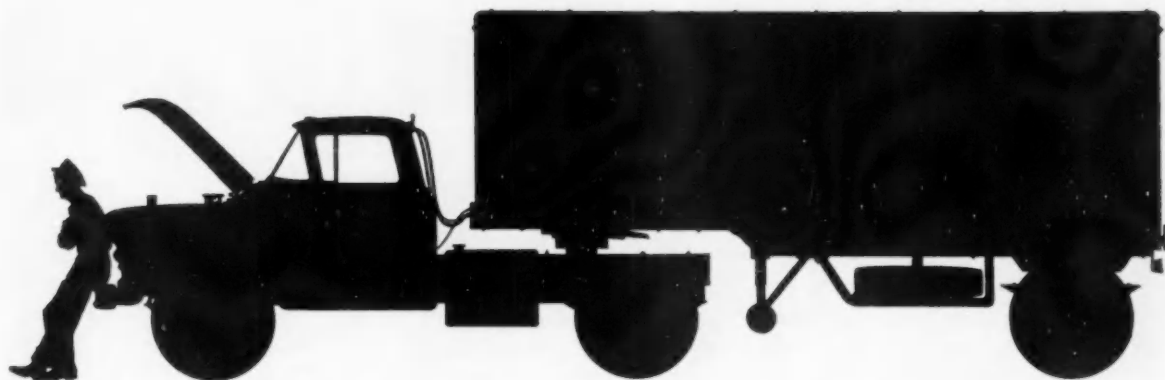


**International Harvester Co.**, has opened a motor truck technical training center for International truck service men in six southern states at Atlanta, Ga. The center is located at 580 Whitehall St., S. W.

**Aircraft-Marine Products**, Harrisburg, Pa. has changed its name to **AMP, Inc.**

(TURN TO PAGE 182, PLEASE)

# \$20,000 holdup



**Grand larceny, that's what it is—when dead batteries prevent on-time fleet deliveries. Play safe, be sure with an Extra-Duty Delco Battery—its warranty means what it says!**

Delco Batteries are built for long life—that's why they are backed by long-life warranties, good in the United States or Canada.

Back of Delco's matchless performance and longer life is something equally matchless: the combined research and engineering skills of Delco and General Motors. No wonder

General Motors Proving Ground tests show performance far surpassing the normal demands of any fleet service.

Dry or wet charge, Extra-Duty Delco batteries give you the lowest possible cost per mile of operation—and Delco batteries are available everywhere.



**available everywhere through  
Delco Battery Distributors**

**TUNE IN**

**ON TV . . .** Spectacular "Wide Wide World" on NBC Network.

**ON RADIO . . .** Lowell Thomas Newscast on CBS Network.

See your local listings for time and station.





R. W. Spencer, west coast sales-service, Hendrickson Mfg.



G. C. McManis, Long Island City branch mgr., Trailmobile



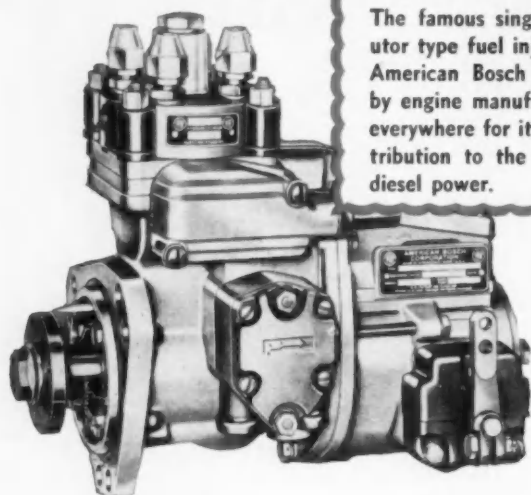
J. P. Jatis, two-way radio service training manager, Motorola



E. B. Ogden, equip. development vp, Consolidated Freightways



J. L. S. Snead, Jr., board chairman, ATA RRCC



The famous single-plunger distributor type fuel injection pump—the American Bosch PSB—recognized by engine manufacturers and users everywhere for its outstanding contribution to the expanding use of diesel power.

*the PSB fuel injection pump*

## UNEXCELLED

... for performance and outstanding service—that's the acknowledged record of more than 100,000 American Bosch PSB pumps now in use.

Here's some reasons why! Simple construction... fewer parts... accurate fuel metering and distribution... positive governor control... replaceable hydraulic head for fast field servicing.

What's more—all American Bosch fuel injection products are backed by a growing system of authorized service agencies, fully equipped to provide quick, efficient repair service.

Unequaled value—for top diesel engine performance and economy of operation... long trouble-free life... lower maintenance expense—nothing equals a PSB fuel injection pump.



## AMERICAN BOSCH

Division of

American Bosch Arma Corporation  
Springfield 7, Mass., U. S. A.

4493

## January News Roundup

Continued from Page 180

K-D Lamp Co., Cincinnati, Ohio, has opened a new warehouse at 2228 Thrift Rd., Charlotte 8, N. C.

Binkley Mfg. Co. has purchased all rights, title and interest in DeLay patents on DeLay moveable fifth-wheel mounts and DeLay trailer load equalizers.

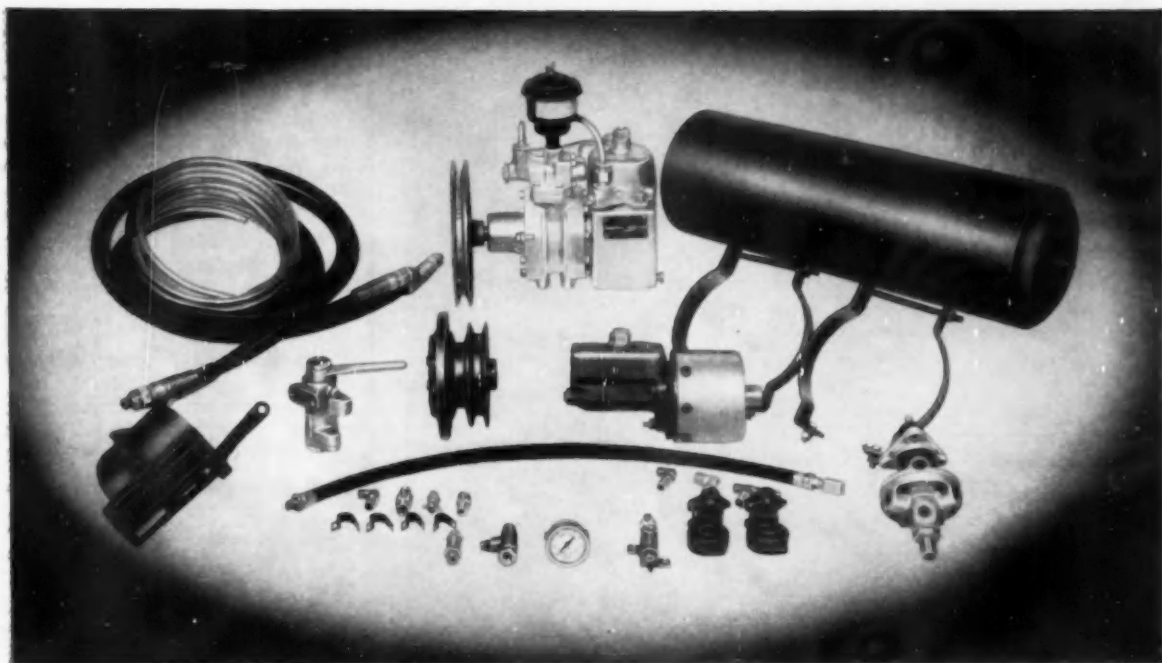
Novi Sales & Service Co. has been named exclusive national distributor for "Artic Traveler" truck and trailer refrigerating equipment. The equipment is made by American Mfg. Co., Montgomery, Ala.

Richard Blair has been appointed sales and service representative for Lempeco Products, Inc. in the states of Georgia and Florida.

Goodyear Tire & Rubber Co. has announced several changes in its sales staff of the tire division. C. F. Stroud has been named acting Southern Division manager for the firm at Atlanta, Ga. J. W. Tulloss, Birmingham, Ala., district manager, assumes Charlotte district duties and, in turn, is succeeded by F. B. Parker, former Columbus, Ohio district manager, who has been on leave of absence.

Appointment of Snowman W. Doe as bus service manager, and Michael J. Fraino, as off-highway service manager has been announced by Mack Trucks, Inc. Doe was formerly with the service engineering department, while Fraino was formerly service manager for the export department.

Roy H. Stewart has been appointed assistant sales manager of the Mate-  
(TURN TO PAGE 184, PLEASE)



# Wagner Air Brake Kits

make it easy for you to convert to a safe, sure air brake system  
... provide everything needed for field installation

You'll like the ease—and the moderate cost—of converting your present brakes by using Wagner Air Brake Kits . . . You'll get the benefit of greater safety, reduced maintenance costs, and maximum performance efficiency.

All Wagner Kits contain original equipment type Wagner Air Brake Units, equivalent to those sold to vehicle manufacturers, to provide standard, full-powered air braking systems.

The Kits are complete—all parts are engineered and designed to fit into proper position with little or no drilling and tapping.

Included in each Kit is the famous Wagner Rotary Air Compressor and the Wagner Power Cluster—a single air-hydraulic unit to provide proper air hydraulic ratios for all vehicles.

Act now! Furnish your fleet with the controlled safety protection of Wagner Air Brakes made possible with these kits . . . Send today for your free copy of Catalog KU-201. It contains full information on Kits and also details on all complete Wagner Air Brake Systems. And remember, when ordering new equipment, be sure to specify Wagner Air Brakes.



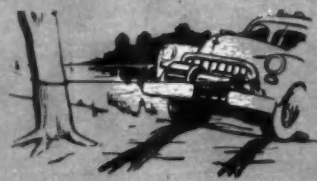
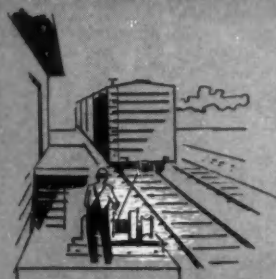
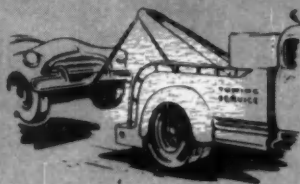
**Wagner Electric Corporation**

6470 PLYMOUTH AVENUE • ST. LOUIS 14, MO., U. S. A.

K57-1

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRoL • CoMaX BRAKE LINING • AIR BRAKES • AIR HORNS • TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

The job's  
a cinch...



## with a **GarWood** winch!

You can depend on Gar Wood winches to handle any application with speed, ease and safety. That's because you get more than just a rating when you specify Gar Wood! You also get a bonus of advanced features unmatched by any other make. Here's how you benefit:

### 1 **DEPENDABLE OPERATION**

On Gar Wood winches the clutch is completely enclosed. Since dirt and weather can't get in, the clutch can't stick, rust or freeze... ever!

### 2 **GREATER SAFETY**

Self-energizing safety brake automatically holds any load up to rating. Back-draft-type clutch can't slip even when only partially engaged. Hexagonal shaft locks control levers in place.

### 3 **LESS MAINTENANCE**

Rust- and corrosion-proof heavy-section aluminum housings enclose all moving parts in an oil bath. Ball-bearing worm shaft, bonded brake linings and heat-treated drum shaft assure a long, trouble-free service life.

Check Gar Wood's famous line of truck and stationary winches in ratings from 7,000 to 100,000 pounds. Contact your Gar Wood-St. Paul truck equipment distributor, or mail coupon below.

## **GAR WOOD INDUSTRIES, INC.**

Wayne, Michigan • Richmond, California

### **MAIL FOR SPECIFICATIONS**

CUSTOMER SERVICE DEPARTMENT CCJ-1

Gar Wood Industries, Inc., Wayne, Michigan

Please send me specifications on Gar Wood winches.

Name \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

## **January News Roundup**

Continued from Page 182

rials Handling Division and manager —motor freight sales of the Howe Scale Co., Rutland, Vt.

William Manion, Chillicothe, Ohio, has been appointed territory salesman for the tire division of Dayton Rubber Co.

END

Please Resume Reading Page 92

### **Classified Advertisement**

**SALESMEN—All Territories Open—Excellent opportunities with a manufacturer for A-1 Salesman for emergency Double Diaphragm Air Brake Chambers for trucks and trailers. Substantial commission basis. Excellent income for someone familiar with motor carriers. Give complete resume about yourself and your sales experience. Hoppenstand Motors, Inc., Conneautville, Pennsylvania.**

**KEN** quality  
job-designed  
**BEAD  
BREAKERS**

Now... Improved  
design handles  
NYLON and TUBELESS  
beads with  
unprecedented ease

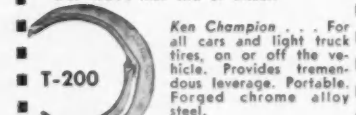
#### **T-99A**

A whiz for auto, light truck tires — Nylon, tubeless, tube-type. Now break beads on all type wheels with greatest of ease.



#### **T-100**

**Ken Presto**... For all auto tires and safety wheels — Nylon, tubeless, or tube-type. Chrome alloy steel handle. Won't mar tire or wheel!



#### **T-200**

**Ken Champion**... For all cars and light truck tires, on or off the vehicle. Provides tremendous leverage. Portable. Forged chrome alloy steel.



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SAVE LABOR, TIME  
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Finest Quality and  
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MEANS DOLLARS  
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CENTS FOR YOU!



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**CARTRIDGE CHECKER CHART**  
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USE ONLY GENUINE  
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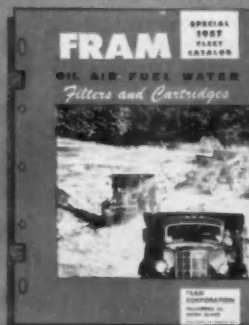
**SPECIAL FLEET DECAL**  
identifies correct cartridge replace-  
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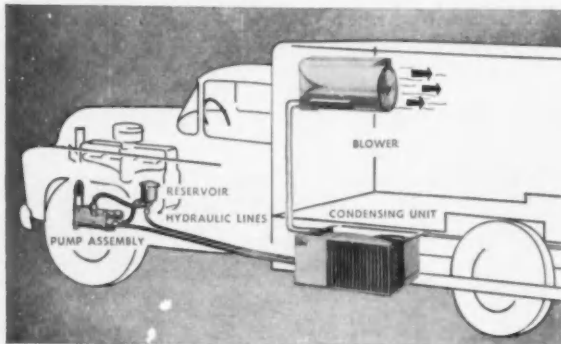
**AIR FILTER CATALOG**  
complete information for air filter  
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These valuable service aids will help you keep your fleet on the road around  
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OIL • AIR • FUEL • WATER  
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# an important advancement



## in constant speed truck refrigeration

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(Patents Pending)

Here is a real achievement in truck refrigeration. Here is a simple, compact, low-cost system of truck refrigeration, weighing only 446 pounds, that delivers constant refrigeration at varied engine speeds. It delivers continuous refrigeration and high-speed pull down on the route.

Because of the simplicity of the new drive unit, the revolutionary Ram-jet condenser and the Turbo-jet blower evaporator, the Kold-Trux CROWN Series costs less to buy, less to install, less to operate, less to maintain and gives more refrigeration, more pay load and more profits. Remember, it's pounds lighter, too!

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The variety of truck plates plus the wide, wide range of mechanical refrigeration systems permits Kold-Hold to provide you truck refrigeration tailored to your needs. Make Kold-Hold your headquarters for truck refrigeration.



**KOLD-HOLD®** division **Tranter Mfg., inc.**

230 E. Hazel St., LANSING 4, MICHIGAN

## GVW Gets A Going Over

By Joseph Geschelin,

Detroit Technical Editor

GVW RATINGS were cussed and mauled and fragmented at a recent Transportation and Maintenance meeting of the Detroit Section, SAE. Perhaps the severest critic was fleetman D. B. Smith of Consolidated Freight Co. who is also a director of the American Trucking Assns. According to Smith, confusion is rife on GVW ratings. So much so that he ignores them when buying new equipment.

This confusion, he says, stems from special interpretations of GVW on the part of each interested party. For example, the basic standard is supposed to be the rating established by the factory chassis engineers. However, the sales department provides special options such as oversized tires, heavier axles, reinforced frames, etc., and thereby boosts the GVW rating.

On the other side of the question is the attitude of state officials. Smith pointed out that in 28 states the factory GVW rating is taken as the floor for tax purposes, even if an operator may wish to carry lower payloads. At the same time, these states encourage operators to establish any higher GVW ratings they wish.

### GVW and Stopping Ability

Stopping ability of motor trucks was discussed by C. A. Lindblom of IHC. Careful consideration of ratings and loading must be employed. The ability to stop from any speed is of major importance, and the braking ability of a given vehicle is limited by design considerations, i.e., limitations on the diameter and width of brake drums for a given chassis.

Safe stopping distance is definitely degraded by overloading, according to Lindblom. He also emphasized that the prediction of safe stopping distance cannot be made by formula since any calculation demands that you have incipient skid on all tires. And this is not necessarily true in actual practice.

He warned against brake legislation by the states, noting that regulations may impede progress in design by specifying sizes of brake drums and components. He feels that the 20 mph criterion for stopping distance is quite satisfactory as it can easily be checked out and furthermore it is a good indication of any maintenance deficiency. It is up to the vehicle manufacturer to guarantee that safe stopping is effective at higher speeds.

### GVW and Vehicle Durability

The relationship of durability and GVW ratings was the assignment undertaken by F. E. Sandberg of Ford Motor Co. He warned that while durability is entirely dependent upon good operating and maintenance practices, overloading beyond the design GVW of any truck will affect durability adversely. As a horrible example he pointed to the nominal 2-ton rated truck which has GVW ratings ranging from 17,000 to 24,000 lb.

By the use of charts, Sandberg showed clearly that overloading will reduce the life of an engine by causing it to operate for longer periods at higher loads; that clutch life and tire life is reduced by overloading; that transmissions will have their life sharply reduced when operated in the lower gears too long due to overloading. The same applies to driving axles and brakes.



Blue Truck Lines, Los Angeles, Cal., has added six Fruehauf special "cube liner" drop frame furniture vans to its fleet—first units of this type ever constructed. To be used for new furniture, the vans are nearly 13 ft 6 in. high over all, with a 20-in. floor drop and an inside height of 10 ft 8 in. and 93-in. width. Construction is a composite steel framing and aluminum sheeting.

## Extra Mud Guards Protect Load

OREGON State law requires mud guards behind rear wheels on all trucks. A. F. Coats Lumber Co., Tillamook, Ore., goes this regulation one better—with considerable advantage.

"We have a good deal of bad weather here," J. E. Lahmon, yard manager says, "and this brought the problem of removing mud splatter from lumber carried on our flatbeds. An extra set of mud guards in front



of the rear wheels corrected this. With these extra guards we have practically no trouble with mud being thrown on the lumber load."

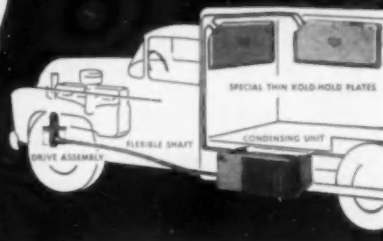
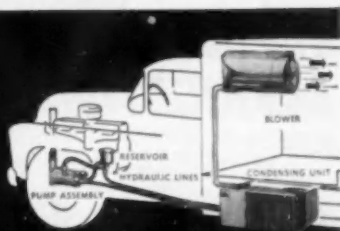
Mud splatter guards are placed in front of back wheels on all company trucks which are used for hauling open loads. These guards are riveted to a 1-in. angle iron which is bolted to the frame.

The front guards are divided in the middle and laced with metal fasteners. They carry a ½-in. strip of iron bolted across near the bottom to prevent excessive swinging and hold the mud guard in position.

Guards are 24-in. wide, 33-in. long, and extend down to within 11-in. from the ground. They are made of rubberized canvas, reinforced with three pieces of 2-in. wide, ¼-in. strap iron, riveted to the rubberized material.

## KOLD-HOLD® truck refrigeration

**NEW**  
*Planning Service...*  
*helps you analyze*  
*your truck refrigeration*  
*needs!*



### Helps you plan

A wide range of outstanding products, supported by a unique servicing distributor program and backed by 25 years of experience qualifies Kold-Hold to help you plan your truck refrigeration program wisely. Long-range planning will give you what you need when you need it.

### Helps you budget

Let Kold-Hold planning help you ward off the unexpected strains that are an ever-present danger in considering only present needs. Planning for the future can pay off handsomely in value received for your budget dollars.

### Helps you get more refrigeration for your money


Analyzing your needs helps you obtain truck refrigeration tailored to your specific operations. Call on Kold-Hold to help you obtain more refrigeration for your money through a well-planned truck modernization program.



**KOLD-HOLD®** division **Tranter Mfg., inc.**

230 E. Hazel St., LANSING 4, MICHIGAN

for  
**SUPERIOR  
LUBRICATION**  
use



**Industrial Lubricants**  
Recognized Nationally  
for their  
Superior Quality

**LE #1020 HIGH TEMPERATURE LUBRICANT** is built "tough" to give your equipment the full protection it needs. Critical conditions of high temperatures, speed, load, vibration and long continuous operation challenge the basic qualities of any lubricant. LE #1020 is engineered to cope with all of these—it provides superior lubrication under the most adverse conditions—will not melt or sling off under high temperature—resists heavy load "pounding" and vibration—maintains a tough durable film at all times.

**LE #509 (SAE 90) and #510 (SAE 140) UNIVERSAL GEAR LUBRICANTS** are manufactured from the same high quality paraffin base blending stocks as the finest aviation grade engine oils. Their rich, full-bodied film resists rupturing under severe shock loads—gear cases run cooler—consumption is held to an absolute minimum—and acid corrosion of expensive gears and bearings is virtually eliminated.

**IT PAYS TO USE THE BEST!**

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INDUSTRIAL LUBRICANTS  
FOR INDUSTRIAL EQUIPMENT  
**LUBRICATION  
ENGINEERS, INC.**  
FORT WORTH, TEXAS

**Manufacturers' Literature**

(See page 50 for Fleetman's Library)

Casting repair—valve port, cylinder, freeze cracks, etc.—using the Chain-Lock process of cold repair is described in a new bulletin you can get by circling L 3 on the postcard on page 52.

Truck and trailer washers made by Ross and White Co. are illustrated with actual fleet examples in this bulletin you can get by circling L 4 on the postcard.

Rocker arm refacer just announced by Storm-Vulcan, Inc., is described in this new catalog page you can get by circling L 5.

Flexible shafting for grinding, sanding, wire brushing, drilling, buffing, polishing and filing are illustrated and detailed in this catalog from Stow Mfg. Co. Circle L 6 on the postcard on page 52 for your free copy.

LP-gas vehicle operation is described in this new booklet, "How Truckers Save on Fuel, Lubrication and Maintenance," from Century Gas Equipment Co. Circle L 7 for your free copy.

Flexible couplings for power transmission are covered in this new catalog from Morse Chain Co. Circle L 8 on the postcard for a free copy.

Telescopic body hoists with nine to 34-ton payload capacity made by Galion Allsteel Body Co. are described in a new folder you can get without charge by circling L 9 on the postcard on page 52.

Shop furniture—steel shelving, drawers, lockers, work benches, tables,  
(TURN TO PAGE 190, PLEASE)

Manufacturers of:

- TRAILER JOCKEYS • FIFTH WHEEL CRANES • MOBILE MACHINE SHOPS • SPLIT-SHAFT POWER TAKEOFFS • HYDRAULIC DOCK RAMPS



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PLOWS**



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- WINGS • TAPER PLOWS
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Low Air Pressure Visual Warning has been proven by 7 years service. Low Cost - Easy To Install.

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NEW Low Vacuum Visual Warning requires only one connection. Low Cost.  
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**FOR SALE DUE TO LIQUIDATION  
OF COMPANY  
LOCATED IN VIRGINIA  
ALL MACHINES IN  
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**Gas and Diesel  
Engine  
Rebuilding  
Equipment**

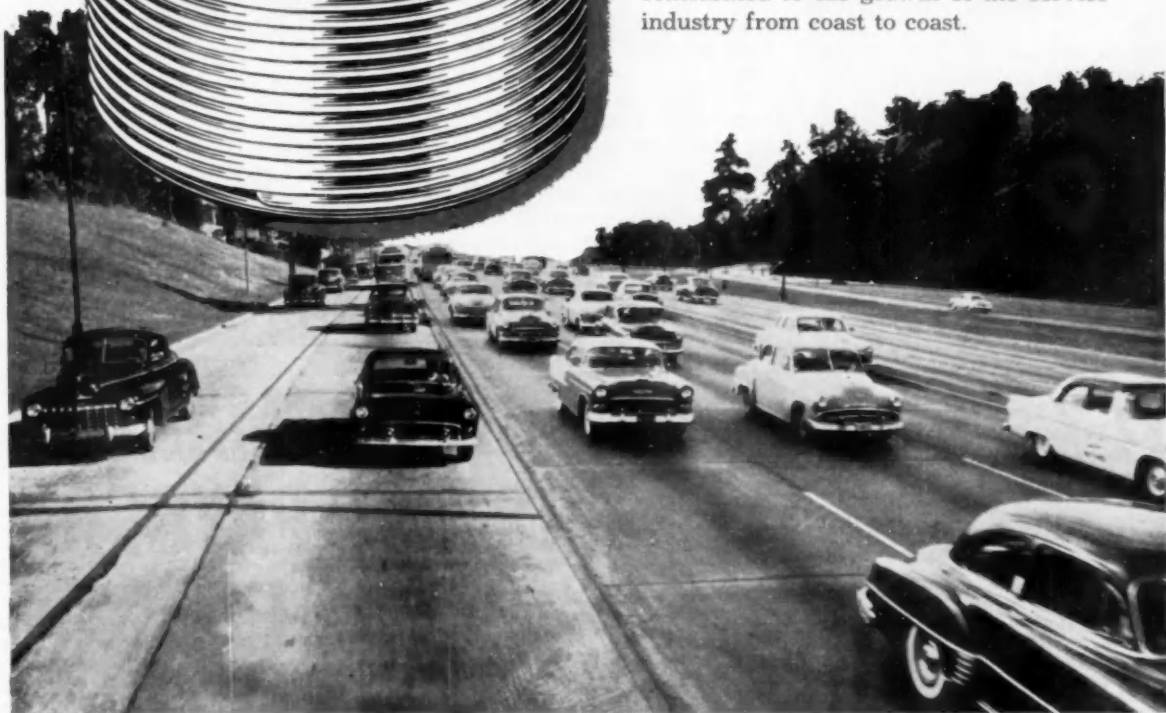
**VAN NORMAN**  
Automotive Equipment Co.  
SPRINGFIELD 7, MASS.





## Concrete Example!

Up and down the length and breadth of the expanding "American road," you see evidence of the fine performance and extra long lifetime built into the modern motor car. Helping to keep the wheels rolling is Kester Flux-Core Solder . . . the automotive trade's preferred choice, "concrete example" of a high quality product that's contributed to the growth of the service industry from coast to coast.



Get These Quality Kester Products From Your Jobber: Kester Acid-Core Solder for general work; Plastic Rosin or "Resin-Five" Core Solder for electrical systems and auto-radio; Radiator Flux-Core Solder.



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*Company*

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Newark 5, New Jersey • Brantford, Canada





### Hobbs' "Bridge" Platforms

Hobbs designed this trailer to bridge the gap between off-highway and over-the-road models, says it's rugged enough for concentrated loads off-highway yet light enough for profitable and legal payloads on the highway. Called the K-Series, it comes in lengths from 33 to 41 ft. Its GVW is 45,000 lb, and it weighs 10,849 lb. Interesting feature is a folding kingpin for use with a 2- or 3-axle truck.

## Manufacturers' Literature

Continued from Page 188

etc.—is illustrated in this new 48-page catalog available from Equipito Division, Aurora Equipment Co. by circling L 10 on the postcard.

Automotive equipment made by Lemco Products, Inc., is described in this new catalog you can get by circling L 11 on the postcard.

Pole-type construction as applied to fleet buildings is illustrated in this

new booklet from Dow Chemical Co. Circle L 12 on the postcard on page 52 for your free copy.

Derrick for utility and other bodies with 8000-lb capacity and 195 deg operating range is described in this new 4-page booklet from J. H. Holan Corp. Circle L 13 on the postcard for your free copy.

Hydraulic brake parts are the subject of this new complete catalog from Eis Automotive Corp. For a free copy, circle L 14 on the postcard.

Self-supporting jib cranes for shop use with six to 15-ton capacity, 360-

deg rotation are described in this new folder from R. G. LeTourneau, Inc. Circle L 15 on the postcard on page 52 for a free copy.

Shop equipment—steel shelves, parts bins, desks, tables, work benches, etc.—are illustrated in this general catalog from Precision Equipment Co. Circle L 16 for your free copy.

Tire valve for use between duals to keep equal air pressure and thus even wear is described in this new folder from Carlan Instruments. For your free copy, circle L 17 on the postcard on page 52.

(TURN TO PAGE 194, PLEASE)

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- ★ Positions engine at bench level height.
- ★ Turns engine full 360°. Self-locking in any position.
- ★ Handles any engine up to 5000 pounds.

End roll-over of engines up to 70" in length accomplished by tilting spindle upward by means of built-in hydraulic jack which lifts engine sufficiently for full 360° rotation. Engines are attached to spindle by interchangeable adapters. Adapters for most all automotive Diesels now in production. Other adapters made to order.



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WS-21

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That's why  
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There's no substitute for on-the-job performance. That's why people who have tried all the others always come back to the Bendix® Electric Fuel Pump when they need "must do" performance. The Bendix pump has passed all the tests. Under military supervision, it proved

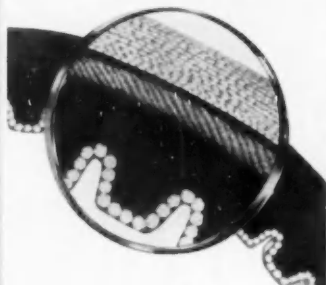
itself at 114° Fahrenheit as well as at 76° below zero. No other pump anywhere near its price class could make the grade. The Bendix Electric Fuel Pump is easy to install and service, delivers more gallons per hour—and positively eliminates vapor lock. It's the best fuel pump built.

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**Bendix**  
**ELECTRIC FUEL PUMP**

BENDIX AVIATION CORP. (Eclipse Machine Div.), Elmira, N. Y.

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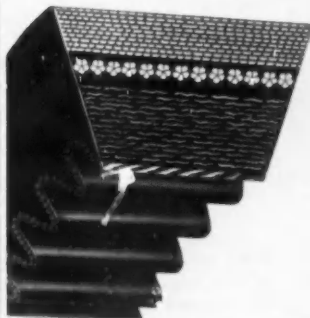


## COMPARE GRIP!

Drive your fans, generators, water pumps and compressors at full capacity at all times! Molded die cut sides of your Cog-Belts never slip . . . never glaze . . . keep their positive grip longer.

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**Compare and See** how much you save . . . in labor . . . in total material costs . . . in inventory costs . . . then count the extra revenue miles . . . when you standardize with Dayton Cog-Belts. Cog-Belts are built to keep your equipment on the road longer and are available everywhere—that's why they're selected by manufacturers as original equipment on tractors, crawlers, road building equipment and heavy-duty trucks.

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\*T. M.

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- ☐ Please send me the address of my nearest Dayton Rubber Company jobber.
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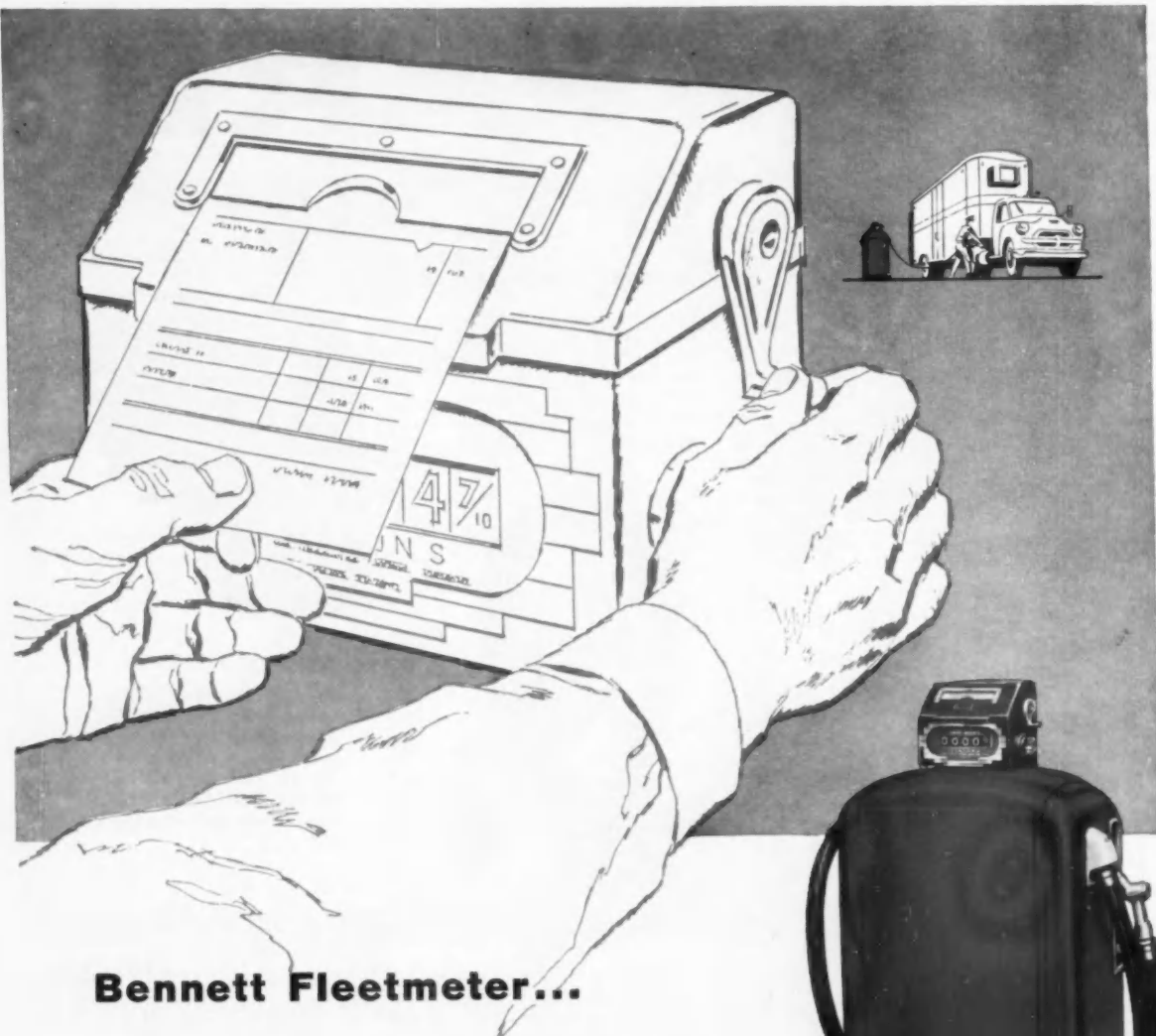


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## Bennett Fleetmeter...

# BUSINESS MACHINE ACCURACY FOR FLEET FUEL CONTROL

Fleetmeter gasoline pumps *keep gas records automatically*... record the exact amount of fuel used by every truck in your fleet. Ticket Printer prints the amount of fuel dispensed for each vehicle on separate tickets for precise records and inventory control.

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*Flash Dries in 15 minutes!*



... No sanding

... Apply finish coat immediately!

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## Ditzler's FERROCHROME PRIMER DPE-1202 Inhibits Rust!

• Besides SATIN PRIME, Ditzler also makes available its popular FERROCHROME PRIMER, DPE-1202 specifically formulated for industrial and fleet use. This is a red oxide non-sanding primer. In addition to all the excellent properties to be found in SATIN PRIME, DPE-1338, this FERROCHROME PRIMER is a highly effective rust inhibitor.



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## Manufacturers' Literature

Continued from Page 190

Brake safety equipment, including dash control valve with built-in trailer air indicator, low vacuum indicator, one-way air check valves, breakaway valve, low air pressure indicator, are described in a new series of brochures from Berg Mfg. & Sales Co. For your free copies, circle L 18 on the postcard.

Vehicle parts, including dash controls, tube fittings, fuel and oil lines,

brake hose, power steering lines, hose and hose ends, swivel adapters and tools, are described in Weatherhead Co.'s new catalog. Circle L 19 for your free copy.

Welding data, including arc welding aluminum, a basic welding manual, and a welding technique wall chart, is being offered by Eutectic Welding Corp. Circle L 20 on the postcard on page 52 for your free copies.

"Tire Dynamics" just published by Motor Vehicle Research, Inc., South Lee, N. H., covers, says the author, five years of testing automobile tires.

Result is a 280-page book with 400 illustrations. It can be ordered direct from the publisher at \$15.00 a copy.

"Traffic Department Organization" is a look into the industrial traffic department. It will give you some idea of your customers' problems. It is by John H. Frederick, University of Maryland professor of transportation. Copies are \$6.00 each, can be ordered from Book Division, Chilton Co., Chestnut and 56th Sts., Philadelphia 39, Pa.

END

Please Resume Reading Page 52



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In new metallic decal colors, too!

Today every Zinsmaster Baking Company trucks looks for all the world like a giant loaf of Master Bread (recently redesigned by Raymond Loewy). These Meyercord Truck Decal Signs include colorful pictorials plus accent stripes that mount perfectly over compounded curved areas, across seams, hardware and the rear door. Especially interesting... the name and lettering have been produced in new metallic decal colors... a remarkable exclusive Meyercord development in the decal field.

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WITH THE EXCLUSIVE REVERSE CAP SWITCH LOCK. IT CAN'T BE REVERSED WITH THE SWITCH ON. IT LASTS LONGER.

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**THE BUXBAUM COMPANY**  
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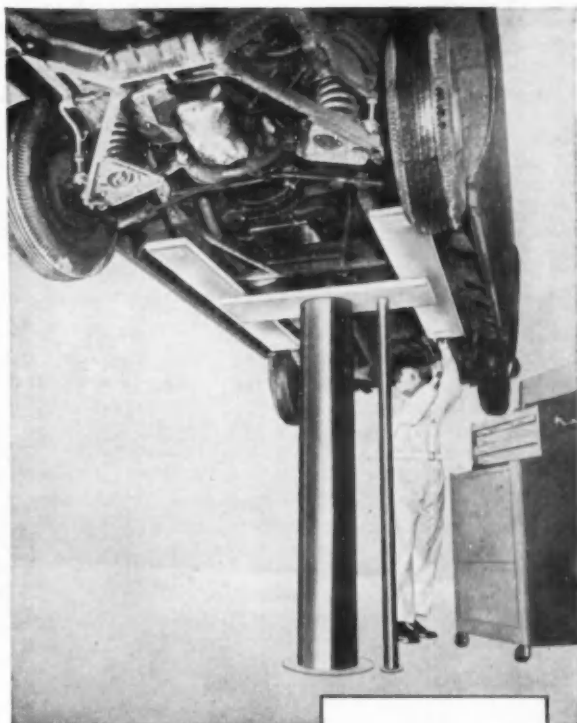


# FASTEST WAY TO INCREASE SERVICE PROFITS . . . SPEED REPAIRS

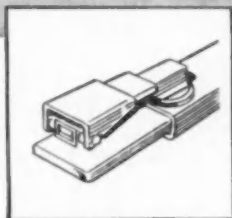
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Studies prove that 75% of all service operations can be done easier, faster, and more effectively when using a Globe "Frame-Kontakt" Hoist. Mechanics work more comfortably and efficiently standing up, with all tools and equipment readily available. The entire underbody of the car is easily accessible on a Hoist . . . lubrication is more effective. Jobs roll in and out more quickly . . . customers appreciate the speedier service.

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# New Product Descriptions

Continued from Page 60

## P32. Grease Gun

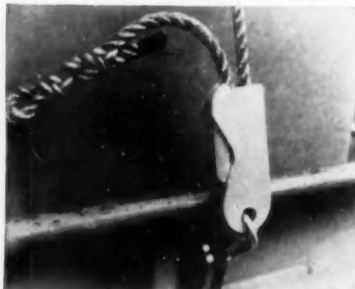
K-P Mfg. Co., Minneapolis, Minn., announces its new cartridge-loader grease gun, capable of developing up to 8000 lb of pressure and accommodating any cartridge. Leakage is prevented by a specially designed plunger to assure maximum sealing, and the spring is tapered for easy nesting. Another feature is an elliptical shaped lip which smooths out dented cartridge when loading.

## P33. Fastener

Tru-Lock Fasteners, Inc., Woodbury, Conn., announces a new self-locking fastener. Its construction consists of an unthreaded nylon nut that snaps into a square hole in the inner surface of the materials being joined. A self-tapping screw (type "Z" recommended) driven into the "Grippit" engages the mating portion and impresses its own threads on the inner wall. Constant grip of the nylon upon the threads of the mating screw creates a vibration and shock resistant assembly.

## P34. Rope Lock

Aeroquip Corp., Jackson, Mich., has introduced this new rope lock. It is designed for use with either  $\frac{3}{8}$ -in. manila or nylon rope. Its flexibility and simplicity provide a quick, easy method of securing almost any type of load. Tension is automatically locked at whatever maximum pull is exerted. The load can be instantly released by pressing down on the cam, the only moving part. No springs or artificial mechanisms are used in the "Rope Lock" as the force exerted by the rope sets the cam. Strengths of 1000-lb with nylon or 700-lb with manila rope are obtainable.

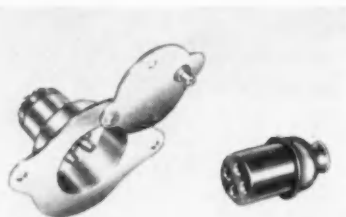


## P35. Metallizing Powder

Wall Colmonoy Corp., Detroit, now has a metal powder developed specifically for rebuilding engine and compressor crankshafts by the metallizing process. Anti-friction qualities of the surface produced by the new powder are said to give longer crankshaft life. The material is a high chromium-nickel powder containing chromium borides. It features an unusually low coefficient of friction.

## P36. Trailer Connector

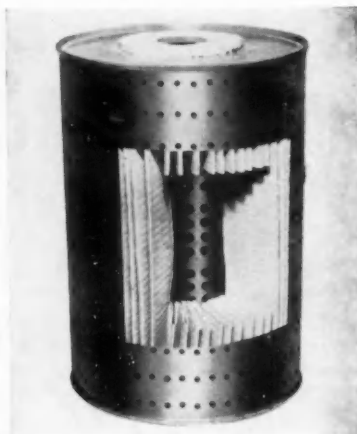
Cole-Hersee Co., Boston, Mass., is now producing a lightweight, four-pole, electrical trailer connector assembly, specially designed for use on house trailers, boat trailers, utility trailers and other automotive and trailer equipment. Cole-Hersee No.



11110 trailer connector features a flanged socket assembly with precision-machined contacts and a knob-equipped pivot cover to keep out the weather plus a hard rubber insulated plug, both of which are polarized. The flanged socket arrangement allows for flush mounting.

## P37. Powered Cart

Getman Bros., South Haven, Mich., now has for national distribution a small truck called "Getman Scoot-Crete." One man can load, drive and dump with this vehicle carrying loads up to 3500 lb, at speeds up to 15 mph. With caster steering, it turns in its own length for easy maneuverability. Drive wheels are located directly under the load to insure a sure-grip on any surface. Locking brake lever holds the unit immobile. Powered with a Wisconsin gasoline or a Deutz air-cooled diesel engine, it has the power to climb hills up to 25° in both forward or reverse gears.



## P38. Oil Filters

W. G. B. Oil Clarifier, Inc., Kingston, N. Y., offers a new line of pleated paper cartridges made from resin impregnated filter paper and cured at exceptionally high temperatures. The curing process makes the paper waterproof and resistant to liquids at extreme motor operating temperatures. The element is built around a metal core, embossed and perforated with sufficient holes to provide a free flow through the filtering element.

## P39. Tube Cutter

E. Edelmenn & Co., Chicago, announces new "Bantam" tube cutter to provide a light weight pocket tool for automotive service men to use in cutting copper, aluminum and brass tubing. Only 4 in. in length, tool cuts tubing from  $\frac{1}{4}$  to 1 in. in diameter. Construction features include a swing-away reamer of sturdy steel and a hardened, carbon steel replaceable cutting wheel.

## P40. C-Clamp

Cincinnati Tool Co., Cincinnati, Ohio, introduces its new C-clamps. These clamps are identical except for the handle. One is a pin type and the other a wing. Each clamp is power tested. Clamp is furnished with a sliding pin handle unless steel wing handle is specified.

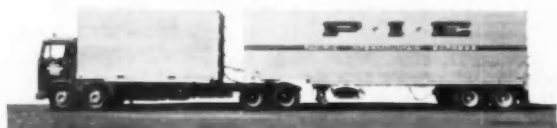
## P41. Welding Generator

Hobart Bros. Co., Troy, Ohio, is now offering the generator only (less engine) of its 250-amp air-cooled gasoline-driven arc welder to those who want to make use of their own power source and save money over the cost of a complete factory built unit. The generator can be operated

(TURN TO PAGE 198, PLEASE)



## **UNOBA**...wheel bearing lubricant used by P-I-E



One of P-I-E's 21 new 4-axle KW dromedary units

Union's UNOBA Grease has been used by P-I-E for more than 12 years as a wheel bearing lubricant.

UNOBA has given excellent performance over the years and today wheel bearing failures are practically a thing of the past. P-I-E's customary procedure is to change the wheel bearing grease at the same time brake linings are replaced...*in many instances this interval may be 100,000 miles or more.*

P-I-E operates and maintains 2,000 line haul units and 800 pickup and delivery trucks. This success with UNOBA Grease is typical of experience had by the country's most important motor freight lines.

If you're not yet using Union's barium-lithium base UNOBA Grease, we suggest you order it from your nearby Union Oil representative today.

**UNION OIL COMPANY**  
OF CALIFORNIA



Los Angeles: Union Oil Bldg. • New York: 45 Rockefeller Plaza • Chicago: 1612 Bankers Bldg. • Philadelphia: Eastwick Ave. & Edgewood St.  
Dallas: 313 Fidelity Union Life Bldg. • Kansas City, Mo.: 612 W. 47th St.  
New Orleans: 644 Nat'l Bank of Commerce Bldg. • Boston: 214 Harvard Ave.

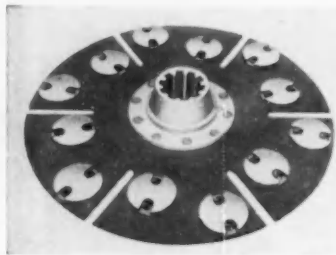
# New Product Descriptions

Continued from Page 196

by direct coupling to a gasoline engine or through V-belts and grooved pulleys connected to an electric motor, gasoline engine, or PTO of tractor, truck, etc. Power required to drive the generator at 2200 rpm is 23 bhp gasoline engine (direct) or 10-hp electric motor (belted).

## P42. Clutch Plates

S. K. Wellman Co., Bedford, Ohio, now has a complete line of button-type, heavy-duty clutch plates for industrial crawler tractors and other types of earthmoving equipment. Un-



like conventional clutch plates with full-ring facings, these plates are fitted with multiple buttons faced with "Velvetouch Ceramic," a friction material made from sintered copper and wear-controlling ceramic elements.

## P43. Battery

General Tire & Rubber Co., Akron, Ohio, announces a new commercial battery—"The Super Expressway"—designed as a dual purpose battery with a lightning quick start for diesel and gasoline engines in light or heavy commercial trucks or buses. Thicker and higher plates create the increased longevity.



## P44. Groove Liner

Hastings Mfg. Co., Hastings, Mich., announces a new way of reconditioning worn top grooves in pistons.



Hastings "Perma-Liner" makes it possible to line the entire top groove with solid alloy steel to obtain longer lasting compression ring fit and performance because the bottom as well as the top of the groove is proofed against wear. Each liner comes in two perfectly - paired segments that butt tightly into the top groove. Each segment is locked into place by a cam lock wrench.

## P45. Fuel Pump

The Tokheim Corp., Ft. Wayne, Ind., is now in the process of making an in-tank electric fuel pump. This pump will be used initially on trucks. However, it is expected to progress to passenger cars and other engine-driven vehicles. Fuel pump works submerged in the fuel tank with a sealed motor and magnetic drive to assure safety. Operating in the tank, away from the heat of the engine compartment, the pump eliminates the possibility of vapor lock. Fuel is delivered to the carburetor under pressure.



## P46. Rotary Drill

Davey Compressor Co., Kent, Ohio, announces a new unit in the rotary drill line. Designated as Model No. M-8AL, and equipped with a special long drill bar and mast, it can drill 24-ft ledges without changing steel. Suitable for mounting on any standard truck, the unit utilizes both compressor air and high pressure water for drilling. It has a rated capacity of 6¼-in. holes up to 600 ft with air and 1500 ft with mud. Compressor and pump are driven by an engine mounted on the truck bed. A 5-speed transmission permits operation of the drill at its most efficient speed.

## P47. Batteries

Willard Storage Battery Div., Cleveland, Ohio, has announced a new line of storage batteries for truck, bus and diesel applications. Feature is a patented plate anchor, a plastic device, inserted between the plate strap and the top edges of opposing plates.

END

Please Resume Reading Page 66

Autocar Division, White Motor Co., has developed a new flexible and rugged rear dumper. Two still larger models are already on the drawing board and expected to be ready in the first half of 1957. This one, the AP-15 diesel is designed to haul rated payloads of 15 tons at speeds up to 39 mph at its governed engine speed of 2100 rpm. Feature of the AP-15 is the planetary gear drive rear axle with the planetary reduction taking place at each outer end of the rear axle, a feature ideally suited for off-highway use. Drive in the AP-15 includes a sun gear at the end of the axle shaft which meshes with and drives three pinion or planet gears. These planet pinions also mesh with an internal ring gear which is firmly held to prevent it from rotating. The planet pinions, therefore, not only rotate about their own axes, but also revolve around the sun gear, and since they are mounted in a planetary gear carrier coupled to the wheels serve as a means of driving the rear wheels.



# TDA<sup>®</sup> BRAKES

*if it moves...we can stop it!*

## equal forward and reverse torque output

Both shoes are applied evenly with equal force and stopping action through a single, straight bore wheel cylinder.

## only 8 different parts,

exclusive of wheel cylinder, the superior "DH" brake design reduces parts inventory and simplifies maintenance... actually 40% fewer parts than most competitive designs.



## "DH" DUPLEX HYDRAULIC BALANCED BRAKE

Designed for heavy-duty service, greater safety, immediate response, less maintenance and easier servicing are all a part of this rugged new hydraulic brake.

Highly efficient, the "DH" brake is basically a self-energizing two-shoe brake in which both shoes do an equal share of the work... and are applied to the brake drum with equal effectiveness in both forward and reverse directions. Floating shoe design eliminates heel and toe clearance problems.

Far simpler, the "DH" brake has actually 40% fewer parts than most competitive designs. This results in smaller parts inventory and easier servicing.

The "DH" brake has already met overwhelming acceptance from many leading manufacturers and operators for its efficiency and design advantages.

"DH" Series Hydraulic Brakes are available in a broad range of capacities and sizes... to meet a variety of operating needs.

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For every industrial, agricultural or automotive application where braking is required!



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Timken-Detroit Brake Division  
Rockwell Spring & Axle Company  
Dept. CCJ-17, Ashtabula, Ohio

Please send me further information on your "DH" brake.

Name \_\_\_\_\_ POSITION \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



# The Best Automotive Sealing Compounds Made ...and Over 50 Other Products Just As Good

Form-A-Gasket No. 1  
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Stick-N-Seal  
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Polish)  
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Windshield Cleaner  
Concentrate  
Car Wash  
Radiator Sealer  
Double Action Radiator  
Cement and Rust  
Preventor  
Heavy-Duty Radiator  
Cleaner  
Cooling System Cleaner  
and Conditioner  
Water Pump Lubricant and  
Radiator Anti-Rust  
Block and Head Sealer  
Knee Action-Jack-  
Shock Absorber Oil  
Hydraulic Jack Oil  
Penetrating Oil  
Solve-Rust  
Permatex Toon-Oyl  
Anti-Seize Compound  
Glass Sealer  
Valve Grinding Compound  
Prussian Blue (Non-Drying)  
Heavy-Duty Hydraulic  
Brake Fluid  
70-2 Hydraulic Brake Fluid  
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Automatic Transmission  
Fluid  
Hudson Clutch Fluid  
Aircraft Polish  
Aircraft Fabric Cleaner

And more than a score of special sealants to meet the specific requirements of a wide range of industrial production applications.



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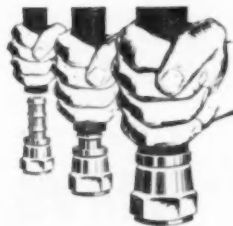
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More Than 50 Chemical Products for Better Automotive Maintenance



Aeroquip Hose Lines help keep the Mushroom fleet rolling on schedule.

## Mushroom Transport Company Speeds Hose Line Replacement, Cuts Costs With



### AEROQUIP **SOCKETLESS** FITTINGS AND HOSE

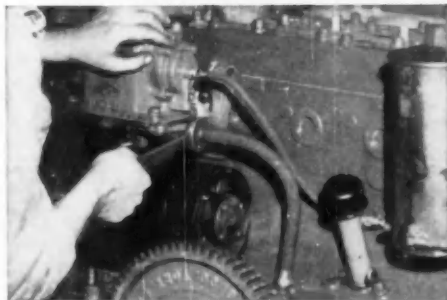
Mechanics at Mushroom Transport Company's Philadelphia Terminal use Aeroquip **SOCKETLESS** Fittings and Hose to make quick replacement engine lines. When a new hose line is needed, the hose is taken from the Aeroquip **SOCKETLESS** Kit, cut to length and pushed on the **SOCKETLESS** Fittings by hand. The hose stays on . . . without clamps or bolts.

Aeroquip Flexible Hose Lines are designed to withstand engine vibration and road shock. This reduces downtime, lowers maintenance costs. And further savings are realized because **SOCKETLESS** Fittings can be salvaged from worn hose lines and used again and again.

Let your Aeroquip Distributor give you full information on Aeroquip Hose Lines for engine applications . . . and new, low-cost Aeroquip Air Brake Hose Lines. He's listed in the Yellow Page Directory. Call him soon.



Using the handy Aeroquip **SOCKETLESS** Kit, this Mushroom mechanic makes a replacement fuel line quickly from bulk hose and reusable **SOCKETLESS** Fittings.



In rebuilding this engine, the Mushroom mechanic is replacing engine lines with Aeroquip **SOCKETLESS** Fittings and Hose for long, dependable performance.

**SOCKETLESS** is an Aeroquip Trademark

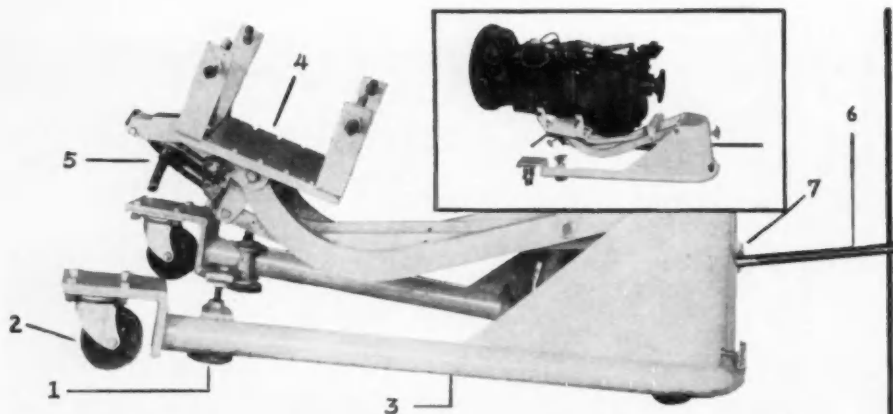
# Aeroquip

REG. TRADEMARK

**AEROQUIP CORPORATION, JACKSON, MICHIGAN**

IN CANADA: AEROQUIP (CANADA) LTD., TORONTO 15, ONTARIO

**SOCKETLESS** Fitting Patents: Great Britain 740,428; France 1,088,423; Austria 185,178—Patents pending in U.S.A., Canada, and other countries.  
LOCAL REPRESENTATIVES IN PRINCIPAL CITIES IN U.S.A. AND ABROAD • AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD



## MOVES 1200 LB. TRANSMISSIONS!

1. Position lock holds dolly to floor when installing transmission.
2. Loaded dolly moves easily on 4" heavy duty casters.
3. 2" steel pipe, one piece construction.
4. 12 inch x 14" sliding transmission platform equipped with universal cradle; hardened set screws.
5. Hydraulic jack mechanism moves platform forward.
6. Portable hydraulic jack raises and lowers.
7. Hand wheel adjusts tilt of platform.

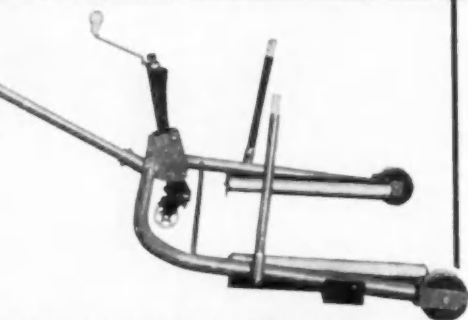
Hydraulic controls move the sliding transmission platform forward at any desired angle, independent of the dolly frame, to align accurately for inserting spline. Drilled platform comes equipped with universal cradle, hardened set screws.



In perfect balance — operator handles heavy dual wheels with ease.



Single wheels are handled with equal ease — here stabilizer is used with singles.



## CAM "Y" DOLLY handles dual wheel units faster — safely!

The T-handle gives complete control of load and maneuvering. Hinged rollers assume angle of axle on jack and prevent binding. Caster-jack lifts and lowers the heaviest dual as easily as the lightest single.

**TWO  
NEW  
TIME  
saving  
MONEY  
saving  
TOOLS**

**for  
heavy  
duty  
truck  
operators**

### TIRE CHANGER



Fast and  
Positive

### TRUCK CRANES



Mechanical  
and hydraulic

### BEAD BREAKER



Safe for  
Tubeless Tires

### PORTABLE CRANES



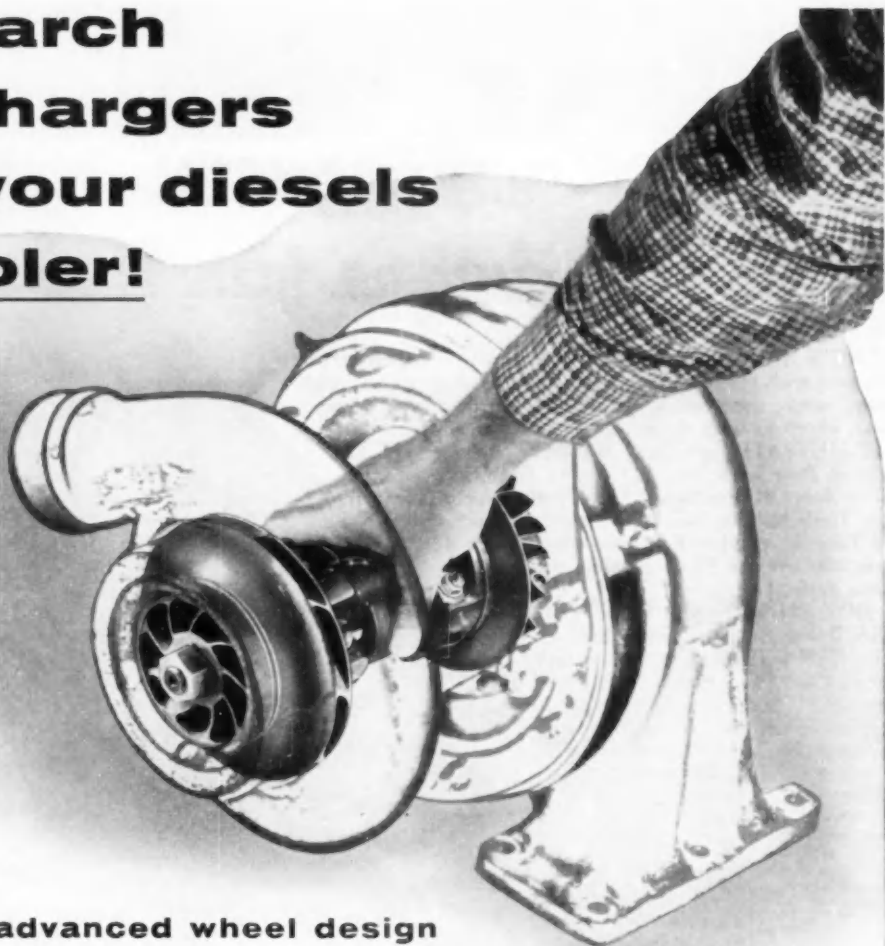
Mechanical  
and hydraulic

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# AiResearch Turbochargers make your diesels run cooler!



**Factors like advanced wheel design  
and perfectly matched turbine and compressor  
keep engine thermal loading at a minimum**

So effective is the AiResearch turbocharger that it provides power gains while actually lowering the heat level of the engine.

Ambient air is compressed with an efficiency as high as 82%, feeding a maximum weight of air into the cylinders at the lowest possible temperature.

Results: maximum power gain at minimum fuel cost; complete combustion with elimination of objectionable smoking; low

engine thermal loading insuring long, trouble-free operation.

All AiResearch turbochargers are air cooled, placing no added burden on the diesel cooling system and requiring no complicated plumbing. The rotating assembly

is removable as a unit, simplifying in-the-field maintenance. This advanced design evolved from the most extensive experience in the field of small turbomachinery in America.

Your inquiries are invited.

#### BASIC SPECIFICATIONS FOR AIRESEARCH TURBOCHARGERS

MODEL	T-10	T-14	T-15	T-30-2	T-30-6
Diameter — in. nom.	9	11.5	15.25	15.25	16
Length — in.	9	14.12	16.75	17.25	21.75
Weight — lb.	40	95	125	135	195
Output — lb./min. (Standard Conditions)	25-40	35-65	35-65	70-95	115-175



**AiResearch Industrial Division**

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DESIGNERS AND MANUFACTURERS OF TURBOCHARGERS AND SPECIALIZED INDUSTRIAL PRODUCTS

# "Keep 'em Rolling Longer"

## with HANSEN

### -the Hardware for Hard Wear

LONGER HAULS—heavy loads—rough roads—tougher service—are met with HANSEN Hardware because it is built to withstand rough, continual usage. Hansen can be applied at less cost, improves body design, and provides faster deliveries.

ILLUSTRATED are these HANSEN products: No. 53 Sliding Door Lock. No. 112 Sliding Door Lock (locks three doors at one time). No. 103 three-point Lock and Flush Handle. No. 107 three-point Lock. No. 89 Triangle Window Regulator—featuring a new principle. No. 80 Flush Handle—neater doors, more payload.

NOT ONLY IN THE BODY BUILDING FIELD but industrial and other uses, HANSEN is finding application, such as on Concrete Mixers—Power Shovels—Cranes—Electric Substation Cabinets—Locomotives—Streamliner Steel Coaches—Motor Boats—House Trailers, etc.

SEND FOR NEW CATALOG showing and describing the complete Hansen Line.



No. 112



The three sliding doors of the above body are locked by No. 112 Sliding Door Lock.



No. 53



No. 101



No. 80



No. 103



No. 112



No. 107



No. 89



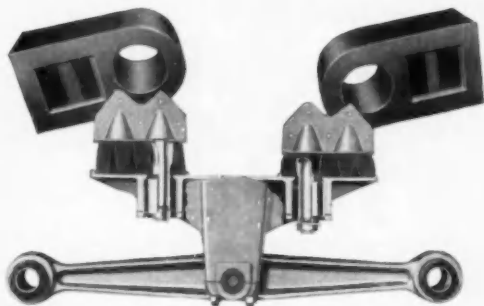
Modern package delivery unit. Built by Aerobilt Body Co., Athens, N. Y. Hansen No. 89 Triangle-type Window Regulator is used for operating window in sliding door. Driver can operate window without moving from his seat.

**A. L. HANSEN MFG. CO.**  
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**FEATURING THE HENDRICKSON LOAD CUSHION**



**NOTE!** Empty, the unit rides on the outer edges of the "load cushion"—as the load increases, the cross bars are brought progressively into contact to absorb the additional load.

New Congress Street Expressway in Chicago

## General Expressways' new fleet has rubber cushion ride...

Mr. John Ruan, Board Chairman of General Expressways, Inc., Chicago, stated in referring to the company's recent \$8,300,000 fleet modernization: "When General Expressways specified Hendrickson RSA-320 rubber cushion load tandem suspensions on its fleet of 43 RF-195 and VF-195 International 6-wheel Tractors, it was because of the success General Expressways and Ruan Transport Corporation have had with the Hendrickson

Suspensions in the past.

"Some of our Hendrickson rubber tandems have 200,000 miles on them. Tire wear has been very good throughout the fleet. The lighter weight afforded by the aluminum equalizer beam has given us added payload."

Hendrickson Tandem design eliminates the causes of excessive tire wear and assures a low cost per tire mile with an easier ride. The complete line of Hendrickson Tan-

dem Suspensions includes the exact size to meet your requirements. Specify Hendrickson Tandem Suspensions for your fleet. For complete details, write

**HENDRICKSON MFG. COMPANY**  
8001 WEST 47th STREET  
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**New Ideas Pay Off in the Trucking Industry**

# OVER THE ROAD... UNDER THE LOAD



**MORE DAYTON TRUCK TIRES ARE ROLLING UP TOP MILEAGE IN BIG MOTOR CARRIER FLEETS, 24 HOURS A DAY, THAN EVER BEFORE!**

It's because the operators find that these Dayton's are **STRONGER** and **LIGHTER** and **COOLER RUNNING!**

You're familiar with the "drive" that's going on in the trucking industry to get costs *down* and earnings *up*. There's even a "new look" to highway haulage vehicles. Design is lighter, stronger—with high-volume space for payload.

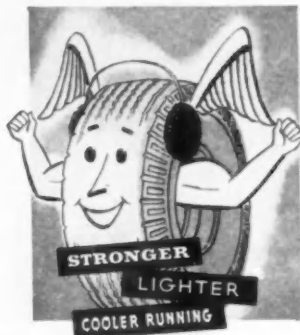
These revolutionary Dayton Truck Tires fit right into this trend toward greater efficiency—resulting from lighter and stronger and improved vehicle construction. Dayton engineers have brought new thinking, new skill into the design of these Tires. Heat-producing

bulk is gone. Great, super strength is provided with marvelous cool-running performance under sustained speed and load.

In your trucking business be sure you begin at the very foundation of superior operation—put Dayton Thorobred Tires on the road under every payload.

Call your Dealer for quick action—or write us at Dayton.

	50	60	70	80	90	100
<b>DAYTON</b>						
<b>Brand A</b>						
<b>Brand B</b>						
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<b>Brand D</b>						



**NEW DAYTON 2200 DENIER SUPER CORDURA TRUCK TIRES ARE 30% STRONGER**

Special, exclusive construction makes Dayton Thorobreds a full 30% *stronger* than the average of 4 other leading 1st line 10-ply (12-ply rating) tires.

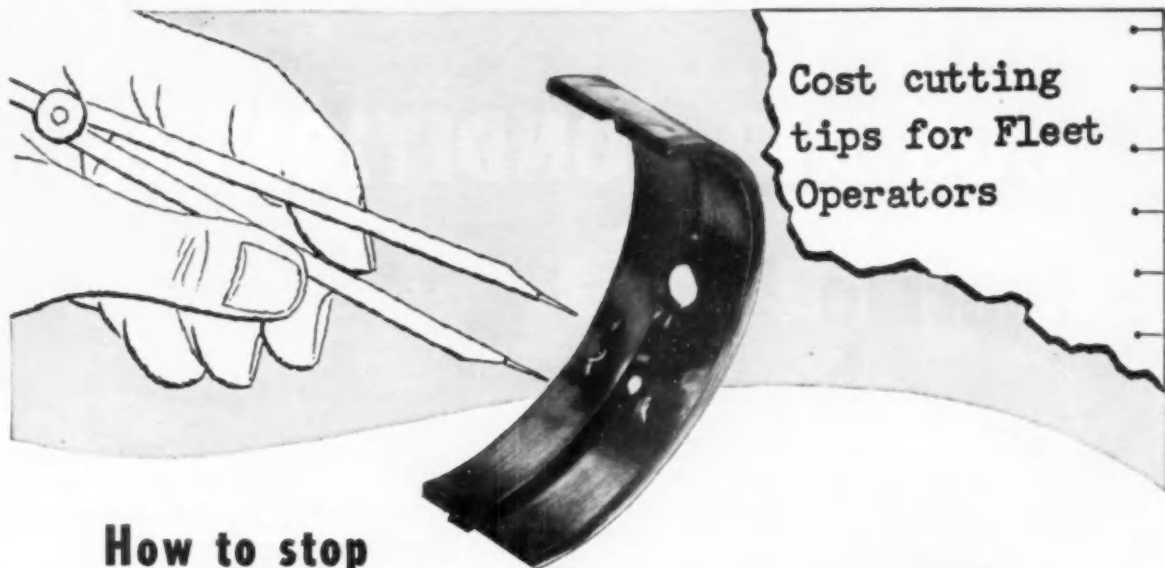


**8 PLIES DO THE WORK OF 12-PLY RATED TIRES**

DAYTON RUBBER CO., TIRE DIVISION, DAYTON 1, OHIO



# Dayton Thorobred Tires



## How to stop bearing corrosion and save on replacements

The corrosion that wrecked this cadmium-silver bearing was caused by acids developed in ordinary lubricating oils. These acids eat into modern alloy bearings in a hurry and shorten bearing life. Frequent replacements, in turn, eat into fleet profits.

To stop bearing corrosion and high operating costs, use Valvoline H.D. Super H.P.O. Motor Oil. It contains a special compound which eliminates corrosion failures of modern alloy bearings.

Other special compounds have been added to Valvoline H.D. Super H.P.O. Motor Oil to give

the motors of your fleet extra life and more efficiency:

1. **DETERGENT** maintains clean engine conditions and gently removes carbon and varnish, keeps rings free.
2. **OXIDATION-INHIBITOR** fights formation of gum and sludge deposits in critical engine areas.
3. **METAL-ADHERING AGENT** stops oil "creepage" from hot spots.
4. **FOAM-INHIBITOR** prevents crankcase foaming that can cause lost oil pump delivery, result in oil-starved bearings.

### The Valvoline Fleet Lab Service

The entire facilities of Valvoline's research laboratory, including specialists in fleet lubrication, supply fleets with corrective service information. Periodically, samples of crankcase drainings will be tested and analyzed, and a prompt report is given and recommendations made for your fleet.

### USE THESE VALVOLINE LUBRICANTS IN YOUR FLEET

- H. D. SUPER HPO MOTOR OIL
- X-ALL ALL-PURPOSE GREASE
- X-18 GEAR LUBRICANT
- VALVOMATIC TRANSMISSION FLUID, (type A)
- GL-1 CHASSIS LUBRICANT
- UNIVERSAL JOINT LUBRICANT
- No. 5212 WHEEL BEARING GREASE

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**VALVOLINE**  
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☐ I am interested in how Valvoline Products can help my fleet maintain service and economy. Send me complete information.

☐ Send full details on the Valvoline Fleet Lab Service.

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City  Zone  State

a new idea in . . .

# BUS AIR CONDITIONING

## Thermo King

METROPOLITAN

the economical, make-sense answer for "comfort conditioning" city and suburban buses



**one piece unit easily installed . . .  
quickly replaced**

Held in position by only six bolts, the unit can be replaced within minutes. No need to take the bus off the street in order to service the air conditioner.

**lightweight unit will cool 50-passenger bus**

Although it weighs only 740 pounds, the powerful and efficient "Metropolitan" will cool a 50-passenger bus—even with a full load and frequent stops. Thermo King's compact system, in its patented single-package design, has been proved in a variety of applications since 1938.

**powered by independent engine or electric motor**

The "Metropolitan" has its own power plant, fully independent of the bus engine. Operating at a low noise level that is not disturbing to passengers, the unit's engine burns either gasoline or propane. For trolley buses, electric power units are available.



- low first cost
- low operating cost
- install in new or old buses

**send for details  
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**THERMO KING CORPORATION, 44 South 12th Street, Minneapolis, Minn.**

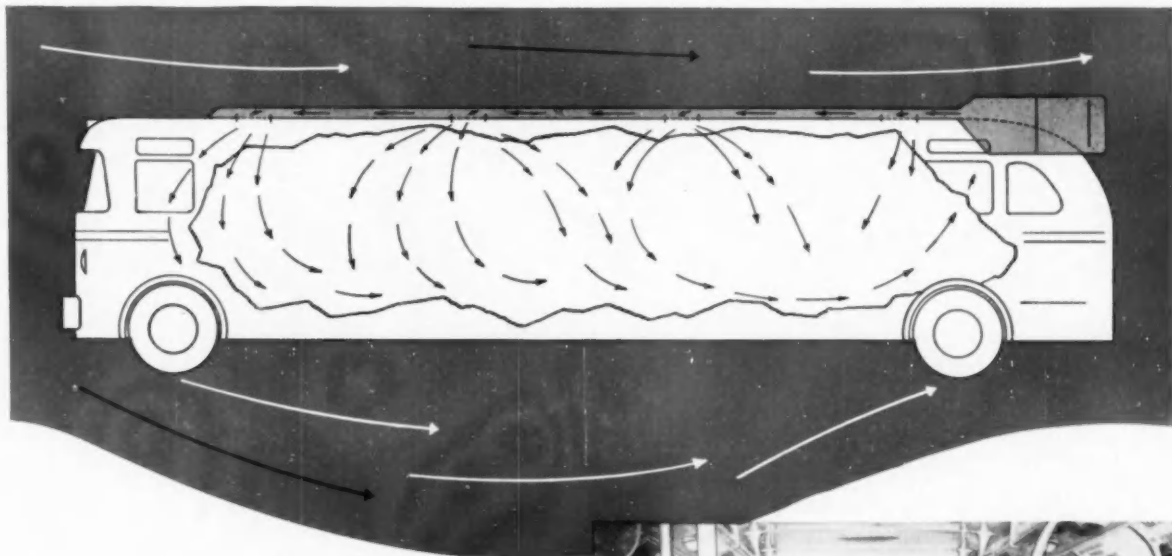
Please send full details of the Thermo King "Metropolitan" bus air conditioning system.

Firm \_\_\_\_\_

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City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Attention of \_\_\_\_\_



**designed and built by largest manufacturer  
of packaged transport refrigeration systems**

The Thermo King Corporation introduced single-unit, packaged refrigeration units for the transport industry in 1938. Most refrigerated trucks on the highways today are equipped with the famous "Thermo King" unit, mounted in the front of the body. Thermo King has also been a major designer and supplier of specialized refrigeration and air conditioning units for the armed forces. The basic principles learned through long experience have been incorporated in the new "Metropolitan" air conditioner for the bus field.

**authorized service stations in metropolitan areas**

In nearly every major metropolitan area in the United States, and in many cities throughout the world, authorized and qualified service is available. Thermo King service stations employ mechanics who have received special training at the factory school. They also maintain stocks of service parts. This is the only service organization of its type in the industry, and this facility is available to operators of Thermo King bus air conditioners.

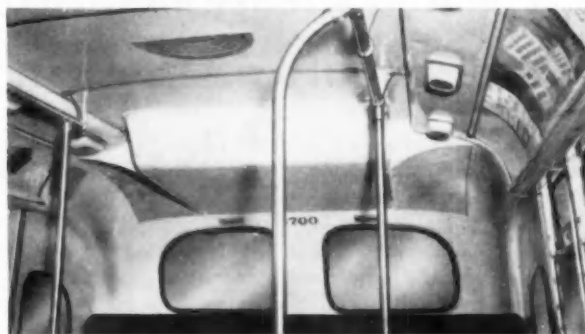
## **THERMO KING CORPORATION**

**44 South 12th Street, MINNEAPOLIS, MINN.**



**no loss of seats . . . no disturbing drafts**

In its position at the top rear of the bus, the unit is in position to distribute cooled air through the overhead duct. In some installations, the existing duct system in the bus can be utilized. Air diffusers in the overhead duct prevent disturbing drafts. A filter is placed in the air stream to remove foreign matter.



**unit removes excess humidity**

Just as important as temperature reduction is the removal of excess humidity. Actual operation in humid weather has proved the efficiency of the unit in this respect.





*Mr. Harold B. Robinson, President of General Auto Rental Co., one of America's largest fleet rental services.*

## **"Look, I lease 6000 fleet vehicles—I know: Plymouth is the smart fleet buy for '57!"**

Chances are there isn't a man in the country who knows more about selling and leasing automobiles than Harold B. Robinson of Philadelphia.

His new car dealerships sell upwards of 5000 new cars annually. His used car auctions handle more than 15,000 autos a year. And his General Auto Rental Co. leases some 6000 cars and trucks of every make to such blue chip concerns as U. S. Steel, Du Pont, RCA and Philco.

Here are his thoughts on fleet cars, in his words.

"My company, General Auto Rental, will lease *any* make of car. Depends on what the fleet manager requests. But when any fleet man asks me for a recommendation, I give the nod to Plymouth for 1957.

"What's more, I recommend the medium-price line—the Savoy—and with automatic transmission. A lot of guys raise their eyebrows when I say that, but there are a couple of darned good reasons.

"First of all, economy. The price is right to begin with, and we've found you can maintain a Plymouth fleet for .005 cent per mile as compared to .0073 for the other low-price cars.

"Second—prestige. It looks like—and *is*—a class car. A guy likes to be seen driving it. Morale is better.

"Why the automatic transmission? Because you'll be able to resell the car easier and faster when it comes time to trade. You'll get a better price. And, of course, the drivers want it and like it. Another morale point."

*Harold Robinson has given the facts. Your Plymouth dealer can give you the figures. Why not get in touch with him today?*

When you drive a **Plymouth** suddenly it's 1960



# Speeds up cleaning jobs anywhere in your fleet!



Use it for wet or dry upholstery cleaning. It helps remove dirt and stains in a jiffy.

Stationed near your wash rack, it's handy to complete cleaning jobs before your vehicles roll.



Saves time and work around your garage or office, too. Reaches anywhere, picks up wet or dry litter.



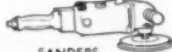
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WRENCHES



POLISHERS



SANDERS



Leading Distributors Everywhere Sell

## **Black & Decker®**

Portable Electric Tools—Power-Built to Last

### **B&D "65" Vacuum Cleaner is POWER-BUILT for wet or dry work**

This handy, powerful Black & Decker #65 Vacuum Cleaner speeds up a raft of cleaning jobs in your fleet, as well as around your garage and office.

Use it as a wet or dry cleaner—it holds up to 3¾ gals. wet or 7/8 bushel of dry material. Its 1¼ hp motor makes it a powerful blower, too. It's equipped with a super-flexible, accordion-type hose that stretches to a full 15 ft. Extra large wheels give it complete mobility even over rough surfaces, can be locked to keep unit from rolling.

You can own a B&D #65 Vacuum Cleaner for as little as \$15.00 per month. See your B&D distributor or write to: THE BLACK & DECKER MFG. Co., Dept. 3901, Towson 4, Md. (In Canada: 80-86 Fleet St., E., Toronto 2, Ontario.)

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... that's what you get with

# HAWKINSON TREADS

Because

- RUN COOLER • LAST LONGER
- GIVE BETTER TRACTION
- BETTER CAR PERFORMANCE

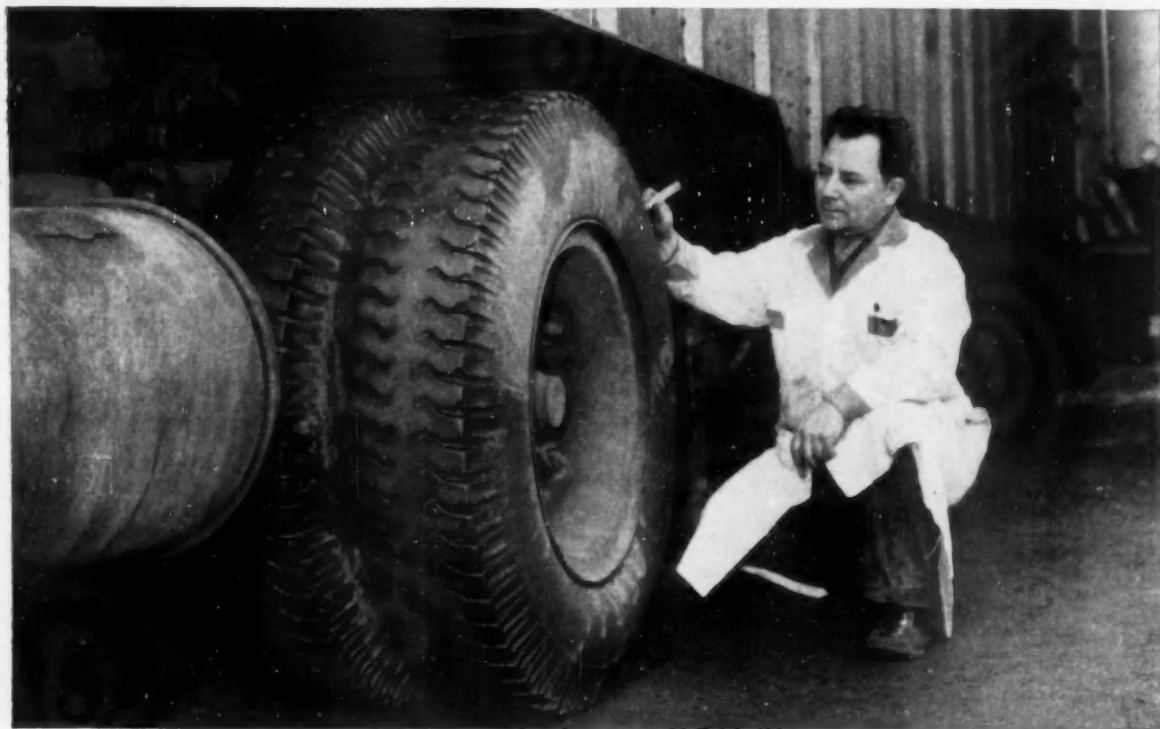
Authorized **HAWKINSON TREAD** Service

In Principal Cities U. S. A., Canada and Foreign Countries

Minneapolis • **PAUL E. HAWKINSON CO.** • Minnesota



# B.F. Goodrich



## Traction Express tires give "tremendous original mileage boost, 2 recaps!"

**R**ODGERS MOTOR LINES, INC., owns and operates 375 general freight-hauling units out of Scranton, Pa. Often trucks work 24 hours a day carrying giant payloads long distances. Operating conditions like this call for tires that can take constant highway pounding and give long, delay-free service. That's why Rodgers uses B. F. Goodrich *all-nylon* Traction Express tires.

The company reports "B. F. Goodrich

Traction Express tires have increased our mileage tremendously and have reduced road delays 75%. We can recap them twice." No wonder truck operators call the Traction Express "the 100,000-mile tire".

B. F. Goodrich builds the Traction Express with a tread that's up to 46% thicker than that of a regular tire. Curved cleats grip the road for positive skid-defying traction. Under the tread

you can get the B. F. Goodrich *all-nylon* cord body. Nylon withstands double the impact of ordinary cord materials, resists heat blowouts and flex breaks. The *all-nylon* Traction Express body outwears even the extra-thick tread, *can still be recapped over and over!*

Why not see the money-saving B. F. Goodrich Traction Express tire at your B. F. Goodrich retailer's today. It's available in *all-nylon* or rayon construction. B. F. Goodrich Tire Co., A Division of The B. F. Goodrich Co., Akron 18, Ohio.

Specify B. F. Goodrich tires when ordering new trucks or trailers

### FREE SAFETY REFLECTOR

when you join the Safe Driver League  
Sponsored by B. F. Goodrich

Sign the safe driving pledge at your B. F. Goodrich retailer's. Show the President's Committee for Traffic Safety you're out to make our highways safer.

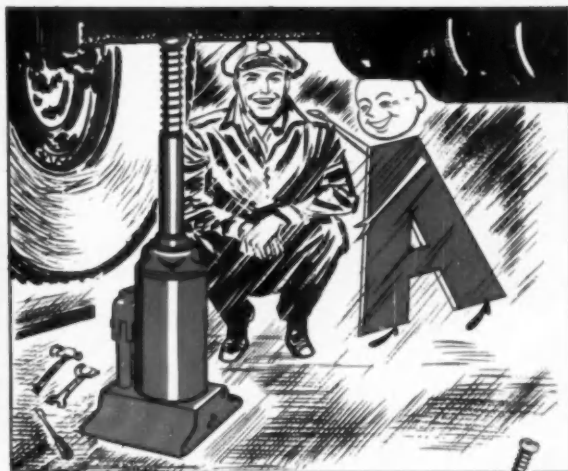


B & T TRUCKING CO., West Point, Miss., reports 120,000 miles from Traction Express tires.



Your B. F. Goodrich retailer is listed under Tires in the Yellow Pages of your phone book





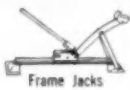
AUSCO ... Manufacturers of  
Quality Jacks for  
every service need!



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Bumper Jacks



"Y-Bar"  
Ratchet Jacks



Frame Jacks



Curb Jacks



Hydraulic  
Service Jacks



One-End Lifts  
Hydraulic and  
Mechanical



Garage Horses

# users count the advantages- no wonder they count on FWD!



There's an important legal payload advantage in the powered front axle and special power and weight proportioning of FWD's four wheel drive!

Petroleum and milk transporters have four that advantage can be translated into 300 extra gallons of payload every trip! It's the same in other industries where FWD's famous balanced weight distribution puts up to 20% more king-pin load on the powered front axle, packs more payload into legal trailer lengths. New FWDs also save tire wear, provide as much as 82% greater traction on slippery surfaces, or in mud and snow!

87% of FWD's sales are repeat sales built on satisfaction. Why don't you join the most satisfied customers in the truck industry? Get the extra payload and safety advantages of FWD for your fleet!



**Heavy-Duty Vehicle Specialists**

**THE FOUR WHEEL DRIVE AUTO COMPANY • Clintonville, Wisconsin • Canadian Factory • Kitchener, Ontario**